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EDITORIAL

Es con gran regocijo y satisfacción que con este número se cierra una etapa y se abre otra en la vida de la revista *Acta Científica Estudiantil*. Este número representa la continuidad de 3 volúmenes completos, con 4 números en cada uno de ellos, haciendo ya 12 números publicados en una trayectoria ininterrumpida a pesar de las adversidades desde su primer volumen en el año 2003.

Empieza un nuevo ciclo, lleno de compromisos y de retos, de mantener y aun mas elevar el nivel científico de esta publicación y de garantizar su continuidad, dado que ahora la revista se encuentra no solamente en el registro de la Biblioteca Virtual Latinoamericana de la FELSOCM, organismo del cual SOCIEM-UCV es Miembro Federado y con gran cantidad de sus miembros en la directiva de esta importante Federación, ahora *Acta Científica Estudiantil* está indizada y disponible en el Índice de Revistas Biomédicas Latinoamericanas IMBIOMED, lo cual representa un hito mas en la historia de SOCIEM-UCV y en la historia de la revista. Agradecemos al Dr. Ezequiel Frago de IMBIOMED por todo el apoyo recibido.

Con este, y otros esfuerzos que se vienen adelantando esta revista abre sus horizontes a América Latina para convertirse en conjunto con revistas hermanas, en un espacio para la difusión del conocimiento científico generado por y para los estudiantes de medicina y de otras ciencias de la salud, que pueden a través de la investigación plasmar sus más profundos sueños de éxito y desarrollo profesional.

Es propicia la ocasión para invitar como siempre a nuestros lectores a adentrarse en el mundo de la investigación, a buscar el apoyo de las Sociedades Científicas, y sobretodo a querer publicar.

El Comité Editorial.

ARTÍCULO DE REVISION – REVIEW ARTICLE

Infectious disease in disaster: Southeast Asian tsunami lessons

Drs: Yuditiya Purwosunu^{1,4}, Claire Rieux², Benard-Alex Gauzere³,
Akihiko Sekizawa⁴, Noroyono Wibowo¹, Hiroshi Chiba⁴,
Farid A Moeloek^{1,6}, Antonio Farina⁵, Takashi Oka⁴.*

¹Dept. of Obstetrics and Gynecology, University of Indonesia, Cipto Mangunkusumo National Hospital, Jakarta, Indonesia; ²Medicins sans Frontieres Belgium; ³French Red Cross (Medical Response Unit); ⁴Dept. of Obstetrics and Gynecology, Showa University School of Medicine, Tokyo, Japan; ⁵Dept. of Embryology, University of Bologna, Bologna, Italy;

⁶Indonesian Medical Association, President.

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**Email: yudi@med.showa-u.ac.jp*

Abstract

The Southeast Asian tsunami underlines the vulnerability of many developing countries from disaster. Many lives of survivors could be spared, if there is better health management and preparedness. Although our health knowledge of flooding disaster has been more advanced than before, understanding of the health impacts of the tsunami is very limited, especially longer-term effects on health and mental health of lost livelihoods. We need further work for guiding us being prepared against disaster.

Keywords: Infection, Disaster, Tsunami.

Resumen

El tsunami ocurrido en el sudeste asiático muestra la vulnerabilidad de muchos países en vías de desarrollo ante los desastres. Muchas muertes pudieron evitarse, si hubiese habido mejores manejos en salud y mejor preparación ante dichas situaciones. Aunque nuestro conocimiento médico de desastres del tipo inundaciones ha avanzado, el entendimiento de los impactos en salud del tsunami es muy limitado, especialmente los efectos a largo plazo en la salud y salud mental de los sobrevivientes sobretodo de aquellos que perdieron familiares. Por eso se requiere un mejor trabajo que guíe en la preparación ante los desastres desde el punto de vista médico.

Keywords: Infección, Desastre, Tsunami.

Introduction

As it already told, on the quiet morning of December 26, 2004, a 9.0 magnitude earthquake occurred off the west coast of Sumatra. The tsunami that followed swept the Indian Ocean, devastating mostly areas of Sumatra and causing more death tolls in about 10 countries than any other tsunami in recorded history.¹

Apart from isolated case report, the medical literature only yielded sparse data on infection diseases during this catastrophe. A recent systematic review of published literature found limited epidemiological evidence about the health effects from flooding disasters. Notably, there were fewer studies from developing countries, where the disease burden is likely to be higher. This review article would attempt to look at common infection problems happened in Southeast Asian tsunami survivor with emphasis on wound/trauma and lung infection which mostly survivors suffered. It might be not sufficient for a review, but one worth sharing, as it might guide the disaster management in similar situation.

Impacts

All told, as of mid-February, an estimated 214,000 people had been killed, at least 142,000 were missing, and more than 34,000 were injured. Hardest hit was Indonesia's Aceh province, which covers roughly 42,000 square miles on the northwest side of Sumatra Island. The WHO estimates that 128,000 people in Aceh were killed by the tsunami, and a quarter of the province's 4.5 million people were injured or lost their homes.²

Infection problems

The impacts to survivor mostly were of two types: aspiration and trauma infection. Many survivors were injured and became grossly contaminated with soil, fresh water or seawater and then infected. Wounds in tsunami survivors usually had not been adequately cleansed, debrided, or dressed. In other cases, victims delayed seeking medication while they searched for missing family members.³

There is some opinion that flooding disasters such as the recent tsunami, the number of serious injuries is much lower than many medical teams expect.^{4,5} However, in this tsunami, of more than 1,000,000 survivors, about 500,000 likely were injured.⁶ For example, among 777 patients transferred to 4 hospitals in Bangkok from southern Thailand after the tsunami, there were 515 with skin and soft-tissue infections. In many cases, the inflammation progressed and further developed into septicemia.⁷

Some survivor inhaled contaminated seawater as caught in the wave. Without any proper antibiotics, they subsequently fell ill with a type of aspiration pneumonia that was accompanied by lung or brain abscesses. Health workers dubbed the condition "tsunami lung".^{6,8,9}

In tsunami-associated infection, it might be helpful to group the likely pathogen by type of exposure (Table 1).¹⁰ The purpose is to make a simple list of the

conceivable pathogens and to focus on major entities or certain unusual infections in tsunami survivors.

Wound infections and sources of infection

Whenever skin integrity is breached, the normal flora colonizing the skin can become source of infection. These include staphylococcal and streptococcal species, with aggressive infections typically caused by *Staphylococcus aureus* and *Streptococcus pyogenes* (Group A streptococcus). But in one study, gram-positive cocci were uncommon causes of wound infections in tsunami survivors.³

Fresh and seawater pathogens

Bacteria classically associated with freshwater exposure are gram-negative bacilli such as *Aeromonas*^{11,12}, *Plesiomonas*¹³ and *Pseudomonas*. Atypical mycobacteria may also be seen in wounds with freshwater exposure. *Mycobacterium marinum* or occasionally, other “rapid growers”, may form granulomatous infections with a sporotrichoid pattern.

However, we have no culture data of wound infection in Aceh. In Thailand, the most common organisms isolated from wound infection were *Aeromonas* species (145 [22.6%] of 641 isolates from 305 patients). It might be caused the survivors' wound usually exposed to contaminated fresh water after their area was flooded. Most isolates were susceptible to aminoglycoside, third- and fourth-generation cephalosporin, quinolone, and imipenem but were resistant to amoxicillin-clavulanate and first-generation cephalosporin.³ In a disaster, since establishing diagnoses in resource-limited situation was difficult, however empiric use of antibiotic should be targeted to the narrowest spectrum possible. More than 85% of isolates of gram-negative bacilli were sensitive to aminoglycosides, third- and fourth-generation cephalosporins, quinolones, and imipenem. Most isolates of *Aeromonas* species, *P. aeruginosa*, and *Proteus* species were resistant to first-generation cephalosporins and amoxicillin-clavulanate.³

Vibrio vulnificus can cause wound infections in patients whose wound are exposed to seawater^{14,15}. Other *Vibrio* species seen infrequently in connection with marine exposure are *V. alginolyticus*¹⁶ and *V. parahaemolyticus*. *Vibrio* infections should respond to quinolone, or ceftazidime plus doxycycline. It has been reported that *Vibrio* sp had 1.6% of total wound infections cultured.³

Soil pathogens

Anaerobes bacteria are commonly encountered in wound infection contaminated by soil. Metronidazole and clindamycin possess the added virtue of excellent oral bio-availability with activity against anaerobic bacteria.

Several dozen cases of wound tetanus also occurred in Aceh. Skin abrasions even superficial cuts, can provide potential portal of entry for *Clostridium tetani*, the gram-positive rod. Tetanus carries a high mortality rate. In Aceh, 106 cases of tetanus and 20 deaths were reported (case–fatality ratio 18.9%). The management

of tetanus consists of wound cleansing, TIG 500 to 3000 IU, initiating active immunization with tetanus vaccine, and supportive care. Oral metronidazole therapy may be superior to intramuscular penicillin; other antibiotics with activity against *C. tetani* include cephalosporins, macrolides and imipenem¹⁷.

Burkholderia pseudomallei is a soil-associated organism endemic in southeast Asia. Cutaneous injuries resulting from inoculation of the pathogen can lead to cutaneous melioidosis as well as septicemic melioidosis¹⁸. The treatment of melioidosis has been reviewed extensively elsewhere.¹⁹ Athan et al⁶ reported on 10 of pneumonia patients, 4 patients with culture-confirmed melioidosis. Other co-isolated organisms included *Pseudomonas aeruginosa* and *Klebsiella* sp.

Mucormycosis has previously been reported in wound infection from trauma and natural disasters²⁰. The report of posttraumatic cutaneous mucormycosis in Australian traveler who was injured in Sri Lanka during the tsunami is consistent with likely soil contamination of his wounds²¹. Diagnosis was made on histopathology showing tissue invasion, and fungal culture subsequently grew *Aphophysomyces elegans*. Treatment in his case consisted of surgical debridement, amphotericin B (liposomal) and adjunctive hyperbaric oxygen therapy.

Sewage and faecal pathogens

As a result of the disruption in sewage and sanitation systems, contamination of wounds by faecal material should also be considered. The pathogens associated with this scenario typically include gram-negative coliforms, such as *Escherichia coli* and *Proteus* and *Klebsiella* species. Third-generation cephalosporin or quinolone may be used empirically until susceptibility testing is available. In one report, *Escherichia coli* was 18.1% of all wound infection cultured.³

Rat bite, although uncommon, may pose a problem in some area. These injuries are a risk for rare organisms such as *Spirillum minus* and *Streptobacillus moniliformis*, which has been described to cause fulminant illness even in healthy persons. Antibiotic treatment includes amoxicillin/clavulanate or doxycycline.

For patients whose traumatic wounds are deep, heavily contaminated, located on the lower body, and/or have a foul-smelling discharge, the possibility of mixed infection with aerobic gram-positive cocci, aerobic gram negative bacilli from fecal bacteria, and anaerobes should be considered.

Pulmonary Infections “Tsunami lung”

Tsunami lung happened when survivor being swept inhaled saltwater contaminated with mud and bacteria thus creating pneumonia-like infections which normally are treated with potent antibiotics which hardly found. As a result, otherwise treatable infections festered and, in some cases, traveled through the bloodstream to the brain, where they produced abscesses and caused neurological

problems, including paralysis. A diagnosis of tsunami lung is based on chest X-ray plus CT scanning of the brain to document abscesses.⁸

The individual cases had presented in many journal that had similarity in appearance and symptoms.(Table 3)^{6,9,22,23} We also find many patients in our hospital in Sigli presenting about a month after their immersion, with fluctuating fever; chronic, nonproductive cough; and radiological evidence of bilateral, asymmetric, necrotizing pneumonia with cavitations. Some patients developed empyema and pneumothoraces. A notable feature of these patients was their subacute presentation weeks after immersion in the tsunami, the persistence of symptoms despite other broad spectrum antibiotic therapy, and the development of radiological and clinical manifestations of necrosis with pleural involvement.²³

It had two main causes.²⁴ The first was bacterial: some had reported the cultured *Burkholderia pseudomallei* and *Nocardia* species from survivor lungs⁹. Many of tsunami patients described the wave as being “black”. However, it has not been possible to culture *B. pseudomallei* from all patients, and it is likely that their infections were polymicrobial. The second cause was health system failure.²⁵ Health care workers in hard-hit areas had no antibiotics for patients in the early stages of pneumonia. Many of the antibiotics initially used for patients were ineffective, and the use of carbapenem often became first line in post-immersion respiratory infections. In tsunami, it has also been associated with a short incubation period. However, patient who had melioidosis before medical aid arrived in the region would likely have died.

A case report²² described successful antibiotic treatment of a 17-year-old girl who had lost speech and was partially paralyzed because of brain abscesses. The antibiotics, which were administered intravenously, included imipenem, vancomycin, ceftazidime, and metronidazole. Alworth A et al⁹ described a case report of 62-year-old woman was admitted to hospital with a history of vague ill-health for 12 months, and a sub acute illness over the 4 weeks since immersion in the tsunami, with persistent cough, dyspnoea and weakness to the point of being largely bed bound. She was cachectic, had a fever of 37.5°C and scattered crackles in both lower lung fields. She was treated empirically with antituberculous chemotherapy, as well as broad-spectrum antibiotics in the form of amoxicillin and ciprofloxacin orally, but her condition did not improve. Her treatment was changed to intravenous meropenem.

Our experience in Sigli, Aceh, Indonesia

From 26th of December 2004, until 31st January 2005, 61 patients were admitted in Sigli Hospital with a final diagnosis of aspiration pneumonia written in the medical registrar of the hospital. Most cases (73.7%) were admitted during the 2 first weeks following the tsunami. Thirty five medical files only could be retrospectively analyzed. All the subjects stated that they had swallowed sea water and presented respiratory symptoms. They were consisted of 31 adults (20 women and 15 men) and 4 children (aged 11 months to 7 years), mean age was

36 years (11 months to 70 years). Dyspnoea was the most frequently encountered symptom in 28 patients (80%), then fever and ronchi in 19 patients (54.5%), and cough in 17 patients (48.5%). Eight patients (22.8%) presented with associated wounds (chest, limbs, and pelvis), one patient was pregnant. Two patients presented with diarrhea and one expelled amounts of sand in the stools. White cells blood count was checked in 14 patients (40%) and polynucleosis (over 5000 cells / mm³) was found in 8 patients (57%). Chest X ray were performed in most patients but could not be made available to our study, since they are handed over to patients. However, the analysis of 4 X-ray showed a bilateral edema in 2 cases, lung abscesses in one case and a right lower lung pneumonia strongly suggesting aspiration pneumonia in the last case.

As for treatment, most patients were put on empirical antibiotics regimens (33/35), usually based on cephalosporin of 1st and 3rd generation. No bacteriological diagnosis was ever performed as there are no such facilities. Nineteen patients required oxygen (54%), one was put under mechanical ventilation. Mean duration of hospitalization was 4 days, ranging from less than 1 day to more than 26 days. Eight patients died (23%), including 2 children out of 4. Half the patients died within 24 hours after admission.

In addition, by the mobile clinics ran by MSF Belgium showed that respiratory complaints represent the most frequent reason (30.5% of consultation). Most patients complained of that described by patients as being asthma, although patients had no previous history of asthma, before the tsunami.

Other infectious diseases in flooding (tsunami)

After natural disasters or flooding, it was often said that dead bodies of victims can cause epidemics of faecal–oral route diseases such as nonspecific diarrhea, cholera, dysentery, and typhoid.²⁶ Even victims died from trauma or drowning are unlikely to harbour pathogenic organism such as cholera.²⁷ But in case, diarrhea doubled twice to fourth after flooding in Mozambique during 2000²⁸. Although increased incidence of diarrhea disease in affected populations is not associated with increased mortality. Flooding in West Bengal in 1998 was followed by an outbreak of diarrhea, suspected to be cholera, which resulted in 16,590 cases and 276 deaths (case–fatality ratio 1.7%).²⁹ However, in Aceh region itself, faecal–oral route diseases was not major disease of survivors. (Table 2) VanRooyen et al³⁰ described that in the past three decades, epidemic of water-borne disease have been uncommon after floods; they are quite common in large displacement center and refugee camps. It might caused by the fact that the flooding by tsunami was from salt water, so drinking-water source were affected long time. The probability of water-borne disease could be lower.³¹

Tsunami might also create breeding sites for mosquito- diseases such as malaria. After the Mozambique floods of 2000, the number of malaria cases within the

displaced population increased by a factor of 1.5 to two times previous levels.²⁸ Outbreaks of leptospirosis, a zoonotic bacterial brought by rats, have occurred when water is contaminated by infected rodents. Flooding in Guyana in 2005 led to more than 40 cases of leptospirosis.³² But there is no data for this type cases in the South Asian tsunami.

Summary

The Southeast Asian tsunami underlines the vulnerability of many developing countries from disaster. Many lives of survivors could be saved, if there is better health management and preparedness. Although our health knowledge of flooding disaster has been more advanced than before, understanding of the health impacts of the tsunami is very limited, especially longer-term effects on health and mental health of lost livelihoods. We need further work for guiding us being prepared against disaster.

References

1. Titov V, Rabinovich AB, Mofjeld HO, Thomson RE, Gonzalez FI. The global reach of the 26 December 2004 Sumatra tsunami. *Science* 2005;309(5743):2045-8.
2. Organization. WH. Tsunami & health: situation report no. 31., Januari 29, 2005.
3. Hiransuthikul N, Tantisiriwat W, Lertutsahakul K, Vibhagool A, Boonma P. Skin and soft-tissue infections among tsunami survivors in southern Thailand. *Clin Infect Dis* 2005;41(10):e93-6.
4. Sondorp E, Bornemisza O. Public health, emergencies and the humanitarian impulse. *Bull World Health Organ* 2005;83(3):163.
5. Brown H. Treating the injured and burying the dead. *Lancet* 2005;365(9455):204-5.
6. Athan E, Allworth AM, Engler C, Bastian I, Cheng AC. Melioidosis in tsunami survivors. *Emerg Infect Dis* 2005;11(10):1638-9.
7. Wattanawaitunechai C, Peacock SJ, Jitpratoom P. Tsunami in Thailand--disaster management in a district hospital. *N Engl J Med* 2005;352(10):962-4.
8. Potera C. In disaster's wake: tsunami lung. *Environ Health Perspect* 2005;113(11):A734.
9. Allworth AM. Tsunami lung: a necrotising pneumonia in survivors of the Asian tsunami. *Med J Aust* 2005;182(7):364.
10. Lim PL. Wound infections in tsunami survivors: a commentary. *Ann Acad Med Singapore* 2005;34(9):582-5.

11. Semel JD, Trenholme G. *Aeromonas hydrophila* water-associated traumatic wound infections: a review. *J Trauma* 1990;30(3):324-7.
12. Gold WL, Salit IE. *Aeromonas hydrophila* infections of skin and soft tissue: report of 11 cases and review. *Clin Infect Dis* 1993;16(1):69-74.
13. Holmberg SD. Vibrios and *Aeromonas*. *Infect Dis Clin North Am* 1988;2(3):655-76.
14. Ruppert J, Panzig B, Guertler L, et al. Two cases of severe sepsis due to *Vibrio vulnificus* wound infection acquired in the Baltic Sea. *Eur J Clin Microbiol Infect Dis* 2004;23(12):912-5.
15. Chang JJ, Sheen IS, Peng SM, Chen PC, Wu CS, Leu HS. *Vibrio vulnificus* infection--report of 8 cases and review of cases in Taiwan. *Changeng Yi Xue Za Zhi* 1994;17(4):339-46.
16. Ryan WJ. Marine vibrios associated with superficial septic lesions. *J Clin Pathol* 1976;29(11):1014-5.
17. Attygalle D, Rodrigo N. New trends in the management of tetanus. *Expert Rev Anti Infect Ther* 2004;2(1):73-84.
18. Wang YS, Wong CH, Kurup A. Cutaneous melioidosis and necrotizing fasciitis caused by *Burkholderia pseudomallei*. *Emerg Infect Dis* 2003;9(11):1484-5.
19. White NJ. Melioidosis. *Lancet* 2003;361(9370):1715-22.
20. Seguin P, Musellec H, Le Gall F, Chevrier S, Le Bouquin V, Malledant Y. Post-traumatic course complicated by cutaneous infection with *Absidia corymbifera*. *Eur J Clin Microbiol Infect Dis* 1999;18(10):737-9.
21. Andresen D, Donaldson A, Choo L, et al. Multifocal cutaneous mucormycosis complicating polymicrobial wound infections in a tsunami survivor from Sri Lanka. *Lancet* 2005;365(9462):876-8.
22. Kao AY, Munandar R, Ferrara SL, et al. Case records of the Massachusetts General Hospital. Case 19-2005. A 17-year-old girl with respiratory distress and hemiparesis after surviving a tsunami. *N Engl J Med* 2005;352(25):2628-36.
23. Kongsangdao S, Bunnag S, Siriwiwatnakul N. Treatment of survivors after the tsunami. *N Engl J Med* 2005;352(25):2654-5.
24. Wielawski I. Consequence of Disaster: Tsunami Lung: Melioidosis is seen in some survivors. *Am J Nurs* 2006;106(1):78.
25. Garfield R, Hamid AY. Tsunami response: a year later. Postdisaster nursing in Aceh, Indonesia. *Am J Nurs* 2006;106(1):76-9.
26. de Ville de Goyet C. Epidemics caused by dead bodies: a disaster myth that does not want to die. *Rev Panam Salud Publica* 2004;15(5):297-9.
27. Morgan O. Infectious disease risks from dead bodies following natural disasters. *Rev Panam Salud Publica* 2004;15(5):307-12.

28. Kondo H, Seo N, Yasuda T, et al. Post-flood--infectious diseases in Mozambique. *Prehospital Disaster Med* 2002;17(3):126-33.
29. Sur D, Dutta P, Nair GB, Bhattacharya SK. Severe cholera outbreak following floods in a northern district of West Bengal. *Indian J Med Res* 2000;112:178-82.
30. VanRooyen M, Leaning J. After the tsunami--facing the public health challenges. *N Engl J Med* 2005;352(5):435-8.
31. Nayar KR, Sagar AD. South-Asian tsunami. *Lancet* 2005;365(9463):934-5.
32. Morgan O, Ahern M, Cairncross S. Revisiting the tsunami: health consequences of flooding. *PLoS Med* 2005;2(6):e184.

T a b l e 1. Possible pathogens and antibiotics

Type of exposure	Type of organism	Organisms	Useful antibiotics
Skin	Gram-positive cocci	<i>Staphylococcus</i>	Cloxacillin, first generation cephalosporin, clindamycin, macrolides, cotrimoxazole
Freshwater	Gram-negative bacilli	<i>Pseudomonas</i> <i>Aeromonas</i> , <i>Plesiomonas</i>	Ciprofloxacin, ceftazidime, aminoglycosides, aztreonam
	Mycobacteria	<i>M. marinum</i> rapid growers	Ciprofloxacin, cotrimoxazole, tetracycline Clarithromycin, doxycycline, cotrimoxazole, rifampin
Seawater	Gram negative bacilli	<i>Vibrio vulnificus</i>	Ceftazidime + doxycycline, Quinolone
Soil or environmental	Gram positive bacilli	<i>Clostridium perfringens</i>	Penicillin, clindamycin, chloramphenicol
	Gram negative bacilli	<i>C. Tetani</i>	Penicillin, metronidazol, cephalosporin, macrolide
	Fungi	<i>Burkholderia pseudomallei</i>	Ceftazidime,
	Anaerobes	Mucormycosis Micellaneous species	amoxicillin/clavulanate, doxycycline, cotrimoxazole Amphotericin B Metronidazole, clindamycin, penicillin
Sewage or faecal material	Gram negative bacilli	<i>Escheria coli</i> , <i>Proteus</i> , <i>Klebsiela</i>	Third generation cephalosporin, quinolones, aminoglycosides, aztreonam
Animal	Rat bite	<i>Spirillum minus</i> , <i>S. moniliformis</i>	Amoxicillin/clavulanate Doxycycline

*Modified from Lim et al*¹⁰

T a b l e 2. Major Complication of Survivors in Aceh Region*

Major complications	In-patients
acute respiratory infections	2,324 (12,752 out-patients)
watery diarrhea	733
other fevers	247
bloody diarrhea	59
tetanus (Jan 25th)	104

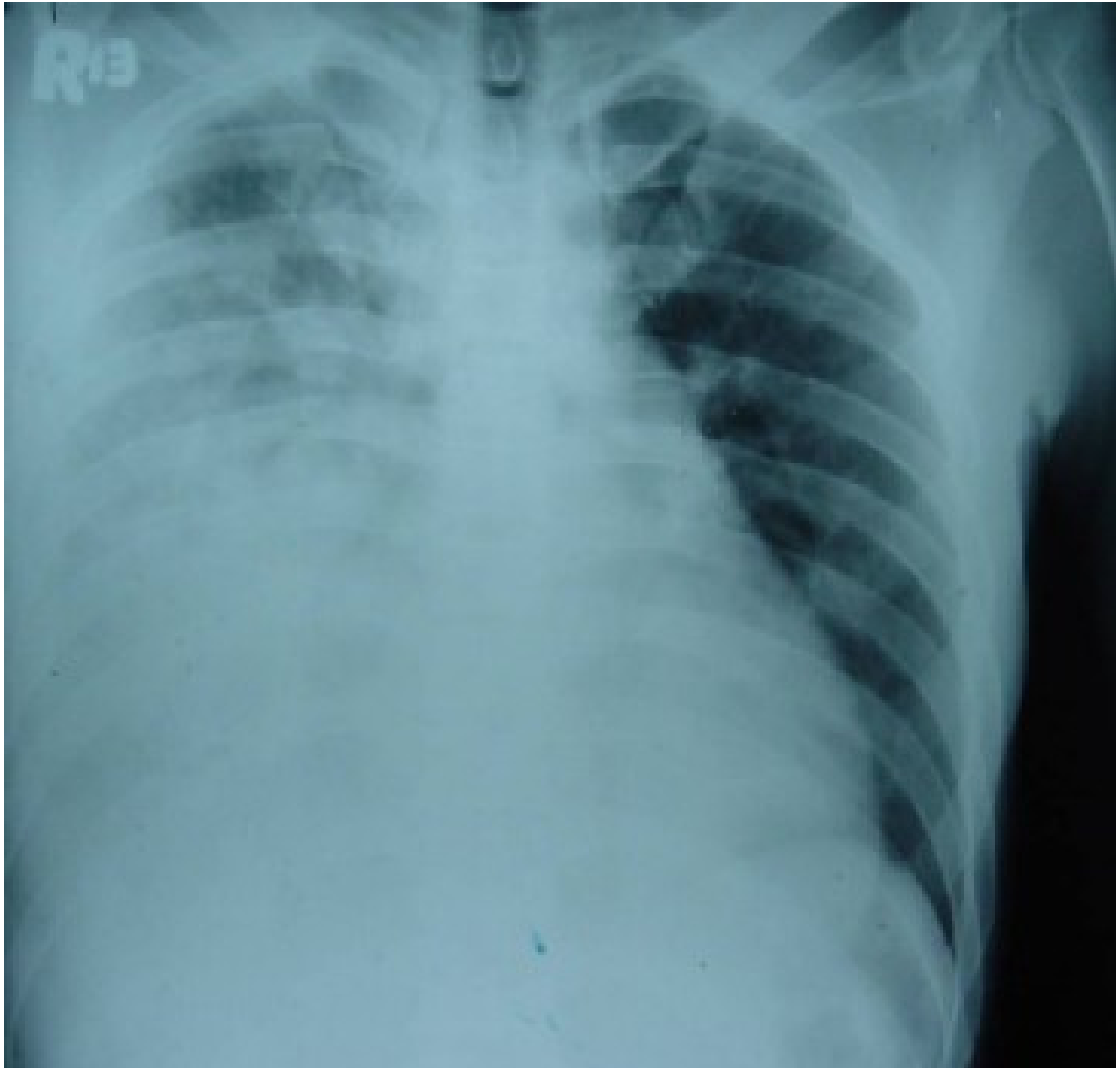
*presented at International Symposium of Tropical Medicine 2005, Marseille, France

T a b l e 3. Summary Case Report of "Tsunami Lung"

No	Age(y) / sex	Radiograph results	Complications	Microbiologic test results	Days bef. Treatment	Antimicrobial drug	Acute outcome
1	62/F ⁹	Necrotizing pneumonia	Empyema	<i>B. pseudomallei</i>	28	Meropenem	improving @14 days
2	24/? ²³	Necrotizing pneumonia	Lung abscess	<i>B. pseudomallei</i>	7	Imipenem	?
3	64/? ²³	Necrotizing pneumonia	Septic shock, hyperglycemia	<i>B. pseudomallei</i>	3	Meropenem	?
4	17/F ²²	Plural effusion	Paralysis	?	49	Meropenem/ Trimetoprim-sufometoxazole	Improving @ 10 days
5	47/M*	Pleural effusion	Paralysis	Not available	14	Third gen Ceftriaxon	Improving @ 60 days
6	12/F*	Pleural effusion	Lung absces, paralysis	Not available	10	Third gen Ceftriaxon	Mortality @ 7 days
7	7/M ⁶	Bilateral infiltrates	Cavitation	No cultures taken	19	Meropenem	Fever resolved, improving @30 days
8	12/M ⁶	Bilateral infiltrates		<i>Pseudomonas aeruginosa</i> (sputum)	37	Meropenem	Serious but stable @12 days
9	5/M ⁶	Unilateral infiltrates	Cavitation	No cultures taken	10	Meropenem	Fever resolved, improving @39 days
10	15/F ⁶	Bilateral infiltrates	Pneumothorax, empyema	<i>Burkholderia pseudomallei</i> (sputum)	27	Meropenem 2 wks, then oral TMP-SMX and coamoxiclav	Fully recovered, discharged @20 days
11.	14/M ⁶	Bilateral infiltrates		<i>P. aeruginosa</i> (sputum)	35	Meropenem	Improving @11 days
12.	6/M ⁶	Bilateral infiltrates		<i>P. aeruginosa</i> (sputum)	30	Meropenem	Improving @19 days
13.	18 mo/M ⁶	Bilateral infiltrates	Empyema	<i>B.pseudomallei</i> (pleural fluid)	30	Meropenem	Improving @23 days
14.	10/F ⁶	Bilateral infiltrates	Empyema	<i>P.aeruginosa, B. pseudomallei Klebsiella sp.</i> (pleural fluid)	30	Meropenem	Improving @23 days
15.	13/F ⁶	Bilateral infiltrates		<i>P. aeruginosa B.pseudomallei</i> (sputum)	33	Meropenem	Improving @18 days
16.	17/F ⁶	Unknown		<i>Nocardia spp.</i> (sputum)	21	Ticarcillin/clavulanate, ciprofloxacin	Not improving, outcome unknown @12 days

* two examples of our patient with "tsunami lung"

Figure 1. Chest X-ray of one survivor with “tsunami lung”



REPORTE BREVE – BRIEF REPORT

Leishmaniasis in the Rural Community: A Patient Perceptions Survey and Development of Educative Program*

Lic. Jessica Vasquez^{1}, Dra. Rosa A. Barbella¹°, Dra. Marisela Ravelo¹,
Dr. Alfonso J. Rodríguez-Morales^{2,3}.*

¹Salud-Miranda, Capaya, Miranda; ²General Direction of Environmental Health and Sanitary Control, Ministry of Health and Social Development, Maracay, Aragua; Venezuela. ³Universidad de Los Andes, Trujillo, Venezuela.

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°Email: dra_barbella_ve@yahoo.es

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Abstract

Leishmaniasis continues to be a public health threat in many countries (350 million people at risk worldwide). In Miranda state (north-central region of Venezuela) annual incidence rate of cutaneous localized leishmaniasis is 5.0 - 8.0 per 100,000 pop, but has a heterogeneous geographic distribution. As a part of health care managing of disease, an educative program was developed in one of the Miranda's districts: Acevedo district; to improve self-care and understanding in all patients, based in part in a patient disease perceptions survey. Leishmaniasis patient's perceptions and program developed is described in present report.

Key Words: leishmaniasis, community participation, perceptions, education.

Introduction

Leishmaniasis is a parasitic infection transmitted by the bite of the sandfly, highly focal, currently endemic in 88 countries, placing 350 million people at risk. The World Health Organization (WHO) estimates that 12 million people are infected today.¹ Leishmaniasis is an extremely complex human and veterinary disease. The disease in human has four forms ranging from self-healing cutaneous ulcers to severer life-threatening infection. The cutaneous form is the most common.²

Venezuela annual incidence rate of localized cutaneous leishmaniasis (LCL) is 7 – 10.0 per 100,000 pop (with geographic variation according to states, most affected locations are in north region of country) (Figure 1). Miranda state is located in north-central region of Venezuela, with an annual incidence rate of cutaneous localized leishmaniasis of 5.0 - 8.0 per 100,000 pop, but has a heterogeneous geographic distribution. Inside Miranda, Acevedo district has a current incidence rate of 38.92 per 100,000 pop (29 cases).

As a part of health care managing of disease, an educative program was developed in Acevedo district to improve self-care and understanding in all patients, based in part in a patient disease perceptions survey. Perceptions and program developed is described in present report.

Methods

Survey with demographic and certain risk factors for LCL was developed and 5 questions about disease concepts. Patients included are LCL diagnosed by microscopy and WHO criteria. With this data was made in part an Educative Program to improve self-care and understanding of disease. Quantitative data was presented as means with standard deviation as well qualitative data was presented as proportions. Chi-squared was used to establish significance of differences in proportions. All data was tabulated and graphs were done with Excel XP® and statistical analysis was done with Epi Info v.6.0 (CDC, Atlanta, GA, USA) (95% of confidence).

Results

Patients age: 29.45 ± 17.13 year-old (51.72% <25 year-old) (Figure 2), 72.41% were males. Patients have 4.59 ± 3.54 months with lesions.

In regard to houses building 75.86% individuals refer those were made with cement (Figure 3).

House location was nearly from abundant vegetation (<50m) in 68.97% cases. About house protection 10.34% answered that use window nets. Illiteracy was observed in 6.90%. Laboral information was obtained showing that 72.41% has a job (47.62% in agriculture, $p < 0.05$) (Figure 4).

Finally, in regard to leishmaniasis knowledge and perceptions: 27.59% has a clear definition of disease, 17.2% has knowledge about disease forms, 27.59% know preventive measures, 41.38% seek medical attention at first time of lesions apparition (Figure 5).

According to this results and reviewed literature, an Educative Program was developed including: speeches, printed documents, a film and an evaluation of learned lessons about leishmaniasis.

Figure 1. Incidence (cases and rates) of LCL in Venezuela states, 1996-1998.

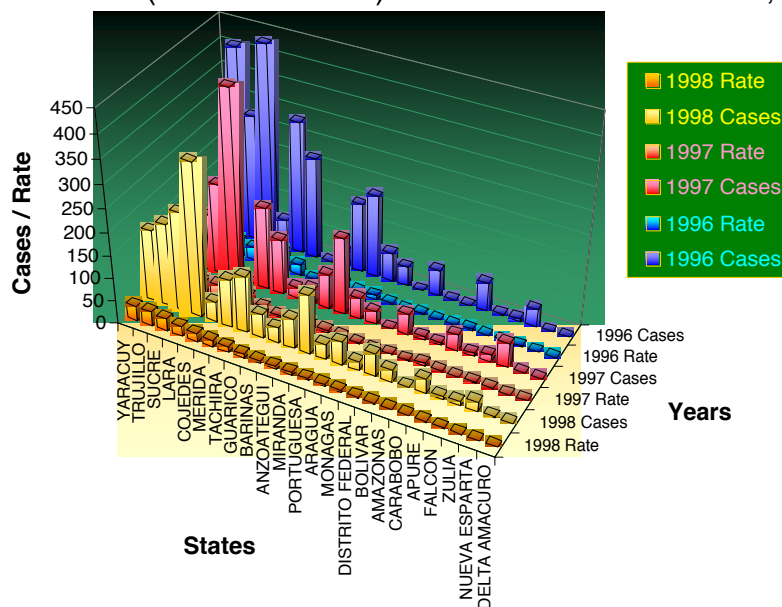


Figure 2. Age distribution of surveyed patients.

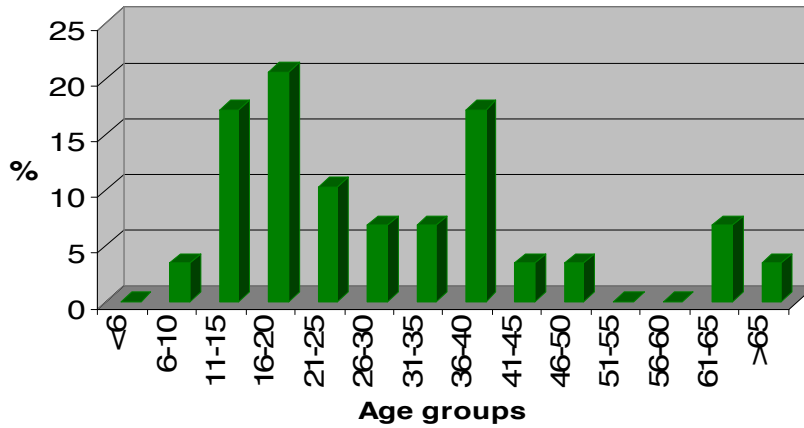


Figure 3. House building of surveyed patients.

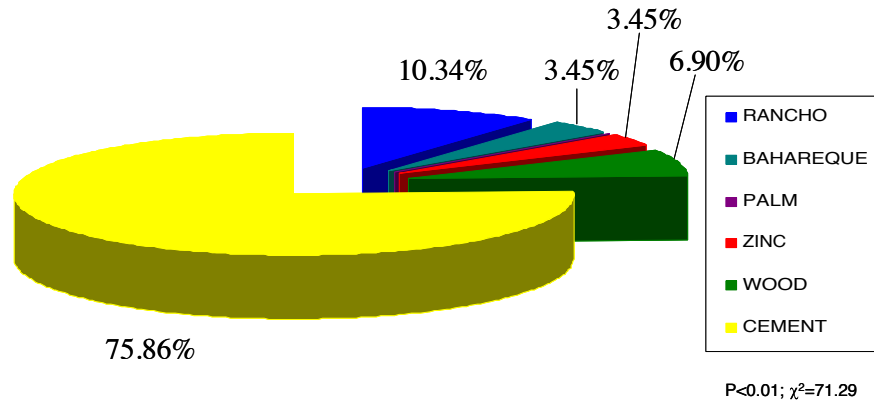


Figure 4. Job distribution of surveyed patients.

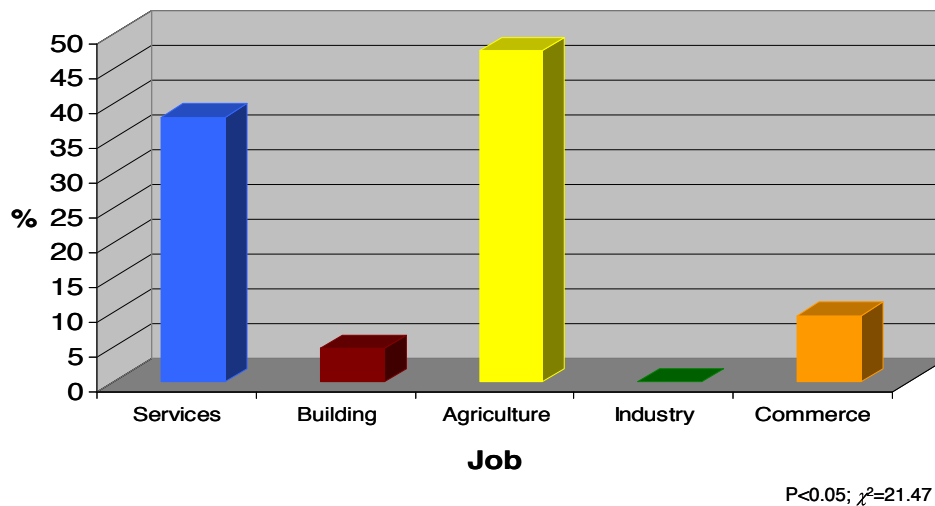
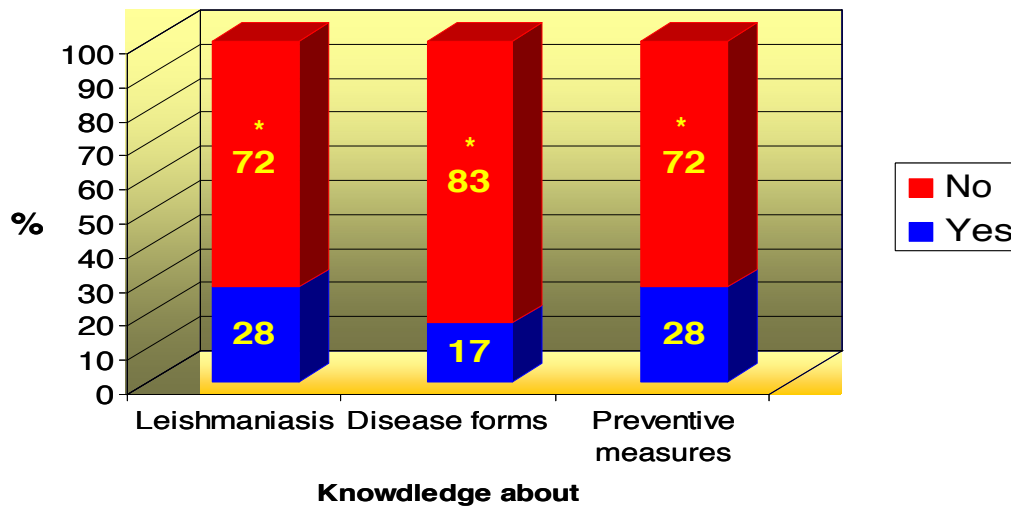


Figure 5. Knowledge of surveyed patients.



*P<0.01

Conclusions

Since 1993, the geographical distribution of leishmaniasis has expanded significantly with a concomitant sharp increase in the number of cases. The increased number of cases seen in recent years has been fuelled by environmental changes associated with development –deforestation, mining, dam construction, new irrigation schemes, and the sprawl of urban areas- that disrupt natural habitats and bring non-immune humans into contact with animal reservoirs and sandflies.¹⁻³

Although leishmaniasis in Venezuela has a low-mortality, leishmaniasis is a neglected disease with a world DALYs (disability-adjusted life years) of 2.4 millions.¹ This indicates needs of prevention, early diagnosis and treatment. Baseline perceptions of LCL patients indicated low-grade of accurate knowledge of disease, in the setting of a population with risky factors for disease (ecological factors, presence of sandflies (*Lutzomyia*), agriculture and coffee seeding, presence of wild and domestic animals, among others).² Improve of this knowledge is well considered in the developed program and will be further evaluated and discussed when this program reach at least one year of implementation.

The principles of community participation have been found to be an important resource for ascertaining and achieving the project health goals of a multiprofessional health team in many Latin-American experiences in similar settings.⁴ This is related with health and sustainable development which are elements intricately interwoven.⁵ Communities under pressure from a barrage of endemic diseases face tremendous obstacles in achieving an improved quality of life. The leishmaniases are examples of hitherto underestimated parasitic zoonoses which place those communities affected at significant risk of morbidity, debility and mortality. Leishmaniasis poses a particular challenge to classical

health systems that tend to resist innovative change needed to address socio-political and economic realities of the present and future decades.^{5,6}

Today, community participation is considered one of the most important elements for the control of endemic diseases (as leishmaniasis) in poor and developing countries, particularly for prevention and epidemiological surveillance.^{7,8}

References

1. WHO. Communicable Diseases 2002 – Global defence against the infectious disease threat. WHO, Geneva, 2003.
2. Maroli M, Feliciangeli MD, Arias J. OPS/HCP/HCT/95/97.
3. Rodriguez AJ et al. Morbidity evolution and trend of American cutaneous leishmaniasis in children of Venezuela, 1965-1999. Oxford 2000 – New challenges in tropical medicine and parasitology, Oxford, UK, September 18-22, 2000:Abst.97:p111.
4. Tauil MC, de Azevedo AC. Community participation in health activities in an Amazon community of Brazil. Bull Pan Am Health Organ. 1978;12(2):95-103.
5. Wijeyaratne PM, Arsenault LK, Murphy CJ. Endemic disease and development: the leishmaniasis. Acta Trop. 1994 Apr;56(4):349-64.
6. Guthmann JP, Calmet J, Rosales E, Cruz M, Chang J, Dedet JP. Patients' associations and the control of leishmaniasis in Peru. Bull World Health Organ. 1997;75(1):39-44.
7. Dias JC. Problemas e possibilidades de participação comunitária no controle das grandes endemias no Brasil. Cad Saude Publica. 1998;14 Suppl 2:19-37.
8. Wong-Un JA. Control comunitario de las infecciones endémicas: pensando los haceres sanitarios colectivos de los campesinos de los Andes peruanos. Cad Saude Publica. 1998;14 Suppl 2:91-100.

ARTICULO DE REVISION BREVE – BRIEF REVIEW ARTICLE

***Aspectos Histopatológicos de la Osteomielitis
Aguda y Crónica Bacteriana***

Dra. Sonia M. Dickson.

*Especialista en Anatomía Patológica, Fellow de la Sección de Patología Ósea,
Instituto Anatomopatológico José A. O'Daly, Facultad de Medicina,
Universidad Central de Venezuela. Caracas, Venezuela.*

Acta Científica Estudiantil 2005; 3(4):118-123.

Email: soniad15@yahoo.es

Resumen

La osteomielitis es una entidad clínico patológica definida por la infección del hueso y la médula ósea. Es más frecuente en niños que en adultos y es causada en un 70-90% por el *Staphylococcus aureus*, el cual coloniza el tejido óseo con mayor frecuencia a través de la vía hematogena a partir de un foco de infección distante; aunque se describen otros mecanismos patogenéticos. Las características clínicas y morfológicas varían de acuerdo a la edad del paciente. Se clasifican en agudas y crónicas para efectos de tratamiento, manejo de modelos experimentales y el tipo de infiltrado inflamatorio que domina el cuadro. La necrosis ósea y el involucro dominan el cuadro en niños mientras en los adultos éstas no son tan prominentes. Se analizan las características clínicas, anatomopatológicas y el valor de la biopsia ósea.

Palabras Clave: Osteomielitis bacteriana, Osteomielitis aguda, Osteomielitis crónica, Histopatología.

Abstract

Osteomyelitis is the infection of the bone and the bone marrow. Is a common disease in children, and less frequent in adults. Some bacteria particularly *Staphylococcus aureus* cause 70-90% of this infection. Hematogenous spread is the most important infection mechanism. Although other pathogenic routes are described. Clinical and morphologic features are different according to patient age. Several classifications of osteomyelitis exist; the distinction between acute and chronic is the most useful for treatment selection, experimental models and histopathology. Bone necrosis and involucrum are the hallmark in children, which is less prominent in adults. Analyses of clinical, anatomopathological features and the bone biopsy role are done in this article.

Key Words: Bacterial Osteomyelitis, Acute osteomyelitis, Chronic Osteomyelitis, Histopathology.

Introducción

El término osteomielitis fué utilizado por vez primera por Nelaton en 1844 y desde entonces se utiliza para designar la infección del hueso y la médula ósea. Ha sido designada de acuerdo al tiempo de evolución clínica en aguda, subaguda y crónica. En general existen múltiples clasificaciones para esta entidad tales como la de Waldvogel y col. quienes distinguen múltiples formas tales como la hematogena y por contigüidad. Cierny y col. distinguen las variantes de la

osteomielitis crónica de acuerdo a su localización anatómica en medular, superficial, localizada y difusa. Sin embargo la distinción entre osteomielitis aguda y crónica es la más utilizada.^{1,2,3} Su incidencia en la infancia se estima entre 1/5000 niños y la neonatal hasta 1/1000.

La osteomielitis puede ser causada por una gran variedad de microorganismos de los cuales las bacterias constituyen los agentes etiológicos principales, el 70-90% son debidos a *S. aureus*. Esta bacteria se adhiere al hueso al expresar receptores para los componentes de la matriz ósea. Además de su capacidad de supervivencia intracelular en los osteoblastos; propiedad que explica la persistencia de la infección ósea por largos períodos de tiempo.^{3,4}

De acuerdo al grupo etéreo y la frecuencia de presentación se han aislado en recién nacidos *S. agalactiae* (Grupo B), *S. aureus* y bacilos entéricos. En niños mayores *S. aureus*, *S. pyogenes* (Grupo A), *S. pneumoniae*, *H. influenzae*.³⁻⁷ En pacientes con hemoglobinopatías como la drepanocitosis, existe predisposición por la infección por *Salmonella*.⁸⁻¹⁰ En adultos la mayoría de las infecciones son causadas por *S. aureus*. Las vías de diseminación, pueden ser hematógena, local o por causas exógenas, derivadas de un foco contiguo de infección, postquirúrgicas y post-traumáticas. En los casos de uso de drogas endovenosas e inmunodeficiencias puede asociarse con *Klebsiella* y *P. aeruginosa*.¹¹⁻¹² La vía hematógena con mayor frecuencia explica la patogenia en pacientes por debajo de los 20 años e involucra extremidades inferiores. La infección tiene como punto de partida un foco séptico preexistente en la piel, vías respiratorias entre otros. El foco óseo en la mayoría de los casos es la metáfisis de los huesos largos como fémur, tibia y húmero, éstos últimos comprometidos en la edad pediátrica, mientras en los adultos esta vía se asocia a infección de la pelvis, huesos pequeños y vértebras.¹⁻¹²

La irrigación de la metáfisis por arterias terminales, asas capilares, sinusoides venosos condicionan el medio necesario para la propagación de émbolos infecciosos, que penetran a través de la arteria nutricia alojándose en el sinusoides arterio-venoso del extremo metafisiario con la consecuente oclusión arterial. La respuesta inmune del huésped y la liberación de citoquinas (IL-1, 6, 11 y FNT) conducen a la necrosis ósea, estímulo para la participación de los osteoclastos en la remodelación ósea. Las variaciones de la irrigación en relación con la edad del paciente pueden explicar la patogenia y algunas complicaciones.^{2,13}

Manifestaciones clínicas y radiológicas

Síntomas y signos locales, aumento de volumen, dolor, calor, rubor, elevación de la temperatura corporal, limitación funcional. A medida que el proceso evoluciona en el tiempo existe tendencia a disminuir el dolor y los cambios agudos son reemplazados por deformidad y supuración crónica.

Los cambios radiológicos son evidentes de 10 a 14 días de instalada la enfermedad caracterizados por erosión de las trabéculas con aspecto apollado. En niños es frecuente observar elevación del periostio y erosión de las trabéculas de la metáfisis con gran destrucción ósea y reacción periosteal prominente.

Presencia de cavidades; hasta evolucionar a esclerosis y deformidades del contorno óseo.^{14,15-17}

Importancia del Problema

La osteomielitis es una enfermedad que debe ser detectada y diagnosticada en sus fases precoces por cuanto al dejarla evolucionar en su forma natural, tiene la capacidad de mantenerse en el tiempo y producir una gran necrosis ósea.

La detección temprana debe hacerse basada en las características clínicas y paraclínicas entre las que destacan síntomas inflamatorios locales, alteraciones de los hemogramas y elevación de la velocidad de sedimentación globular, ya que para el momento en que se observan cambios radiológicos ya se ha instaurado una osteomielitis crónica con consecuencias graves; tales como atrofia, retardo en el crecimiento, angulaciones óseas, ulceraciones, fístulas, y rara vez epitelomas o sarcomas.¹⁶

La biopsia ósea en ésta como en otras entidades representa el diagnóstico de certeza, siendo de gran valor en la fase crónica para la obtención de muestras de hueso para cultivo, ideal para el diagnóstico microbiológico, confirmación diagnóstica y diagnóstico diferencial con histiocitosis, sarcomas Ewing y linfomas.¹⁶⁻¹⁸

Anatomía patológica

Tomando en consideración la evolución, síntomas, signos clínicos y los cambios patológicos, las osteomielitis se clasifican en agudas y crónicas. Esta clasificación es de gran utilidad en la selección del tratamiento y en el desarrollo de modelos animales experimentales.^{1,2,13,15}

La osteomielitis aguda evoluciona en un período de algunos días a semanas y puede curar con antibioticoterapia si es diagnosticada precozmente.³ La osteomielitis crónica constituye una infección persistente que evoluciona de 3 meses a años y está caracterizada por una inflamación de bajo grado con hueso necrótico (secuestro) y formación de hueso nuevo a partir del periostio (involucro).^{1,2,3,6,13}

Al examen macroscópico en los casos de osteomielitis agudas pueden evidenciarse pequeñas fenestraciones en la superficie ósea que eventualmente pueden ser vistas con una lupa cuando son difíciles de observar a simple vista. En las formas crónicas el hueso necrótico y el involucro dominan el cuadro.

En patología ósea gran parte del diagnóstico se fundamentan en el trípede de las manifestaciones clínicas, la radiología y la anatomía patológica.

Los hallazgos microscópicos en la osteomielitis aguda están caracterizados por la presencia de abundantes neutrófilos por lo general con poca o ninguna necrosis ósea. Mientras en la osteomielitis crónica se evidencia una mezcla de células inflamatorias a predominio linfoplasmocitario; aunque pueden evidenciarse algunos histiocitos; se observa fibrosis de la médula ósea, que eventualmente reemplaza las células inflamatorias, necrosis ósea y formación de hueso nuevo.

La necrosis ósea se reconoce por la presencia de trabéculas desvitalizadas de bordes irregulares con lagunas vacías carentes de osteocitos. Estas trabéculas en un espécimen con adecuada descalcificación y tinción muestran una coloración

azul violácea más intensa que el hueso normal. Pueden observarse además osteoclastos en los márgenes óseos que indican reabsorción ósea. El involucro se identifica histológicamente por la presencia de pequeñas espículas óseas en cuyas lagunas se observan osteocitos. Los bordes de estas trabéculas tiene osteoblastos indicativo de la formación de neohueso. El involucro puede abrirse a través de un foramen por el cual hay descarga de material purulento o manifestarse como una comunicación entre el hueso y la piel denominado seno.^{1,2,3,7,13,15-16}

Las áreas de hueso necrótico o secuestro se presentan cuando la irrigación sanguínea periosteal y medular están comprometidas. El hueso reactivo o involucro se forma alrededor del hueso infectado, persistiendo la osteomielitis crónica mientras exista infección en el hueso. Cuando el infiltrado inflamatorio está compuesto por plasmocitos se denomina osteomielitis de células plasmáticas y cuando está constituido por histiocitos xantogranulomatosa.¹⁹

Existen un grupo de osteomielitis crónicas que por sus características distintivas son denominadas especiales, tales como el Absceso de Brodie, frecuente en niños en las metáfisis proximales y distales de la tibia. Caracterizado por abscesos radiolúcidos únicos o múltiples, habitualmente estafilocócicos. Se observan lesiones circunscritas con predilección por los extremos de los huesos largos. La pared del absceso está tapizada por tejido de granulación inflamatorio y rodeada por hueso esponjoso.³ La osteomielitis recurrente multifocal afecta la población pediátrica con períodos de exacerbación y remisión, en la cual no se identifica un agente etiológico. Está asociada a pustulosis palmoplantar y es indistinguible muchas veces por sus características histopatológicas de la osteomielitis crónica.²⁰ La osteomielitis esclerosante de Garré afecta la mandíbula, cursa con un extenso proceso de neoformación ósea.²¹

Conclusiones

La osteomielitis es una entidad en la que el diagnóstico temprano basado en las características clínicas del paciente es fundamental; debido a que no se manifiestan mayores cambios radiológicos durante la fase aguda, considerándose esencial una detección precoz para instaurar una terapéutica antibiótica eficaz de lo contrario el resultado es deletéreo para el paciente.

Los cambios morfológicos varían de acuerdo a la edad y en relación a la irrigación sanguínea. La biopsia ósea en ésta como en otras enfermedades representa el diagnóstico de certeza, por lo cual es de vital importancia un manejo adecuado de los especímenes quirúrgicos para análisis anatomopatológico. Existen pocos estudios que reflejen la incidencia de osteomielitis en nuestro país así como su relación con los distintos agentes etiológicos los cuales en la mayoría de los casos por manejo inadecuado de las muestras o toma de la misma durante el curso de antibióticos exhiben cultivos microbiológicos negativos para crecimiento bacteriano.

Referencias

1. Zuluaga AF, Galvis W, Saldarriaga JG, Agudelo M, Salazar BE, Vesga O. Etiologic diagnosis of chronic osteomyelitis: a prospective study. *Arch Intern Med.* 2006 9;166(1):95-100.
2. Reyes, H; Navarro, P; Jiménez, E; Reyes B, H. Osteomielitis: revisión y actualización. *Rev. Fac. Med. (Caracas);*24(1):47-54, ene.-jun. 2001
3. Ramos OM. Chronic osteomyelitis in children. *Pediatr Infect Dis J.* 2002 May; 21(5):431-2.
4. Parsch K, Savvidis E. Coxitis in the newborn infant and infant. *Diagnosis and therapy. Orthopade.* 1997 Oct;26(10):838-47.
5. Dahl LB, Hoyland AL, Dramsdahl H, Kaaresen PI. Acute osteomyelitis in children: a population-based retrospective study 1965 to 1994. *Scand J Infect Dis.* 1998;30(6):573-7.
6. Bohm E, Jonsten C. What's new in exogenous osteomyelitis?. *Pathol Res Pract.* 1992 2;188(1-2):254-8.
7. Moumile K, Merckx J, Glorion C, Pouliquen JC, Berche P, Ferroni A. Bacterial aetiology of acute osteoarticular infections in children. *Acta Paediatr.* 2005 Apr;94(4):419-22.
8. Chambers JB, Forsythe DA, Bertrand SL, Iwinski HJ, Steflik DE. Retrospective review of osteoarticular infections in a pediatric sickle cell age group. *J Pediatr Orthop.* 2000 Sep-Oct;20(5):682-5.
9. Wu PC, Khin MM, Pang SW. Salmonella osteomyelitis. An important differential diagnosis of granulomatous osteomyelitis. *Am J Surg Pathol.* 1985 7;9(7):531-7.
10. Almeida A, Roberts I. Bone involvement in sickle cell disease. *Br J Haematol.* 2005 May;129(4):482-90.
11. Singh G, Shetty RR, Ravidass MJ, Anilkumar PG. Cervical osteomyelitis associated with intravenous drug use. *Emerg Med J.* 2006 Feb;23(2):e16.
12. Stern JA, Clemens JQ. Osteomyelitis of the pubis: a complication of a chronic indwelling catheter. *Urology.* 2003 2;61(2):462.
13. Salgado CJ, Jamali AA, Mardini S, Buchanan K, Veit B. A model for chronic osteomyelitis using *Staphylococcus aureus* in goats. *Clin Orthop Relat Res.* 2005 7;(436):246-50.
14. Karchevsky M, Schweitzer ME, Morrison WB, Parellada JA. MRI findings of septic arthritis and associated osteomyelitis in adults. *AJR Am J Roentgenol.* 2004 Jan;182(1):119-22.
15. Bone and joints. In Rosai J. (Ed) *Ackermans Surgical Pathology.* 9na edición. New York. Mosby. 2004: 2137-2208.
16. Fitzgerald RH Jr, Brewer NS, Dahlin DC. Squamous-cell carcinoma complicating chronic osteomyelitis. *J Bone Joint Surg Am.* 1976 12;58(8):1146-8.
17. Cabanela ME, Sim FH, Beabout JW, Dahlin DC. Osteomyelitis appearing as neoplasms. A diagnostic problem. *Arch Surg.* 1974 07;109(1):68-72.
18. Campodonico F, Carmignani G. Pelvic sarcoma arising from chronic osteomyelitis. *Clin Pathol.* 2003 Jul;56(7):558-9.



19. Cozzutto C. Xanthogranulomatous osteomyelitis. Arch Pathol Lab Med. 1984 Dec ;108(12):973-6.
20. Girschick HJ, Huppertz HI, Harmsen D, Krauspe R, Muller-Hermelink HK, Papadopoulos T. Chronic recurrent multifocal osteomyelitis in children: diagnostic value of histopathology and microbial testing. Hum Pathol. 1999 Jan; 30(1):59-65.
21. Felsberg GJ, Gore RL, Schweitzer ME, Jui V. Sclerosing osteomyelitis of Garre (periostitis ossificans). Oral Surg Oral Med Oral Pathol. 1990 07;70(1):117-20.



Portadas de los Números correspondientes a los Volúmenes 1 - 3 Acta Científica Estudiantil 2003 - 2005

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2 (3)
Chile

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Argentina



3 (1)
Chile

3 (2)
Panamá

3 (3)
Venezuela

3 (4)
Venezuela



NOTICIAS

Congresos Internacionales 2006-2007 (<http://www.docguide.com/>)

[March 29, 2006 - April 02, 2006](#)

6th International Symposium on Ocular Pharmacology & Therapeutics - ISOPT
Berlin, Germany

[March 30, 2006 - April 05, 2006](#)

International College of Surgeons, Singapore Congress 2006
Singapore, Singapore

[March 31, 2006 - April 02, 2006](#)

1st International Hidradenitis Suppurativa Symposium
Dessau, Germany

[April 01, 2006 - April 04, 2006](#)

International Symposium and Workshops on Peripheral Nerve Block Techniques
Washington, DC, United States

[April 01, 2006 - April 02, 2006](#)

International Symposium and Workshops on Peripheral Nerve Block Techniques Including Use of Ultrasound
Washington, DC, United States

[April 02, 2006 - April 05, 2006](#)

The 5th Congress of the Arab Society of Nephrology and Renal Transplantation in collaboration with the International Society of Nephrology
Amman, Jordan

[April 02, 2006 - April 09, 2006](#)

International Trauma Anesthesia Critical Care Society (ITACCS) Trauma: The Team Approach to the Clinical Challenge
Fort Lauderdale, FL, United States

[April 02, 2006 - April 06, 2006](#)

5th International Ascona Workshop on Cardiomyocyte Cell Biology: DIFFERENTIATION, STABILITY OF CYTOARCHITECTURE AND THERAPEUTIC POTENTIAL OF HEART MUSCLE CELLS
Ascona, Switzerland

[April 02, 2006 - April 06, 2006](#)

5th International Symposium on Pneumococci and Pneumococcal Diseases
Alice Springs, NT, Australia

[April 04, 2006 - April 06, 2006](#)

4th Gulf Heart Association International Conference
Manama, Bahrain

[April 05, 2006 - April 08, 2006](#)

The 3rd International Conference of Jordanian Royal Medical Services
Amman, Jordan

[April 05, 2006 - April 07, 2006](#)

6th International Review of Bipolar Disorders
London, England, United Kingdom

[April 06, 2006 - April 08, 2006](#)

38th International Danube Symposium for Neurological Sciences and Continuing Education
Brno, Czech Republic

[April 07, 2006 - April 08, 2006](#)

11th International Workshop Laser Voice Surgery and Voice Care
Paris, France

[April 08, 2006 - April 12, 2006](#)

4th International Conference on Bone and Mineral Research & 6th International Osteoporosis Symposium
Kunming, China

[April 08, 2006 - April 11, 2006](#)

28th International Charing Cross Symposium
London, England, United Kingdom

[April 10, 2006 - April 11, 2006](#)

11th International Antibacterial Drug Discovery and Development Summit
Princeton, NJ, United States

[April 13, 2006 - April 16, 2006](#)

International Symposium: "The Uterus in ART" & Pre-Symposium Workshops on Ultrasound and Hysteroscopy
Antalya, Turkey

[April 18, 2006 - April 20, 2006](#)

1st International Saudi German Hospital Heart Symposium
Jeddah, Saudi Arabia

[April 19, 2006 - April 22, 2006](#)

9th International Geneva/Springfield Symposium on Advances in Alzheimer Therapy
Geneva, Switzerland

[April 19, 2006 - April 23, 2006](#)

2006 Annual Meeting of the International Association for Orthodontics
Orlando, FL, United States

[April 20, 2006 - April 23, 2006](#)

IBCWG2006 - International Study Group On Mucosa
Ghent, Belgium

[April 22, 2006 - April 24, 2006](#)

International Symposium on Ultrasound and Regional Anesthesia.
Toronto, ON, Canada



[April 22, 2006 - April 25, 2006](#)

5th International Congress on Behavioural Optometry
Sydney, NSW, Australia

[April 25, 2006 - April 27, 2006](#)

The First JNC International Conference
Amman, Jordan

[April 25, 2006 - April 28, 2006](#)

ISLH 2006: XIXth International Symposium on
Technological Innovations in Laboratory Hematology
Amsterdam, Netherlands

[April 26, 2006 - April 29, 2006](#)

8th Congress of the European Headache Federation -
EHF
Valencia, Spain

[April 26, 2006 - April 29, 2006](#)

8th Congress of the European Headache Federation
Valencia, Spain

[April 26, 2006 - April 29, 2006](#)

6th International Conference on Dietary Assessment
Methods
Copenhagen, Denmark

[April 26, 2006 - April 30, 2006](#)

41st Annual Meeting of the European Association for
the Study of the Liver - EASL
Vienna, Austria

[April 27, 2006 - April 29, 2006](#)

IXth International Symposium on Sjögren's Syndrome
Washington, DC, United States

[April 27, 2006 - April 29, 2006](#)

International Dental Implantology Congress, Sharing
Experience
Alexandria, Egypt

[April 27, 2006 - April 29, 2006](#)

1st Congress of the International Dermoscopy Society
Naples, Italy

[April 27, 2006 - April 29, 2006](#)

4th International Shoulder Course ISC
Villach, Austria

[April 27, 2006 - April 29, 2006](#)

50 Congress du GIRSO (Groupement International de
recherche Scientifique en Stomatologie et Odontologie)
Palermo, Italy

[April 28, 2006 - April 30, 2006](#)

11th Update in Travel and International Medicine
Seattle, WA, United States

[April 30, 2006 - May 04, 2006](#)

17th International Conference on the Reduction of Drug
Related Harm. *Vancouver, BC, Canada*

[May 01, 2006 - May 04, 2006](#)

9th International Symposium of Facial Plastic Surgery
Las Vegas, NV, United States

[May 02, 2006 - May 04, 2006](#)

2nd International Psychiatry Symposium
Jeddah, Saudi Arabia

[May 02, 2006 - May 05, 2006](#)

13th International Surgical Pathology Symposium
Rochester, MN, United States

[May 02, 2006 - May 05, 2006](#)

13th International Surgical Pathology Symposium
Treviso, Italy

[May 03, 2006 - May 05, 2006](#)

24th Annual Meeting of the European Soc for
Paediatric Infectious Diseases - ESPID
Basel, Switzerland

[May 03, 2006 - May 06, 2006](#)

4th International Symposium on Neuroprotection and
Neurorepair: Cerebral Ischemia and Stroke
Magdeburg, Germany

[May 05, 2006 - May 06, 2006](#)

Human Implantation: The New Frontiers of Human
Assisted Reproductive Technologies
Erice, Italy

[May 07, 2006 - May 11, 2006](#)

19th International Confernece on Antiviral Research
San Juan, Puerto Rico

[May 07, 2006 - May 10, 2006](#)

ATA2006 11th International Meeting & Expo on
Telemedicine
San Diego, CA, United States

[May 08, 2006 - May 10, 2006](#)

International Spring Course on Functional and
Aesthetic Surgery of the Nose
Bologna, Bologna, Italy

[May 08, 2006 - May 11, 2006](#)

33rd Pan Hellenic Nursing Congress
Island of Kos, Greece

[May 11, 2006 - May 12, 2006](#)

3rd International Meeting on Transplantation from Non-
Heart Beating Donors
London, England, United Kingdom

[May 11, 2006 - May 13, 2006](#)

2nd International Congress in Ukraine "Dental
implantology. Osteointegration."
Kiev, Ukraine



[May 11, 2006 - May 14, 2006](#)

6th Croatian Congress of Extracorporeal Circulation with International Participation
Cavtat, Croatia

[May 12, 2006 - May 13, 2006](#)

Regulation of Follicle Development and its Clinical Implications
Beaune, France

[May 14, 2006 - May 19, 2006](#)

19th International Congress on Thrombosis
Tel Aviv, Israel

[May 19, 2006 - May 24, 2006](#)

American Thoracic Society 2006 International Conference
San Diego, CA, United States

[May 19, 2006 - May 20, 2006](#)

4th Annual International Umbilical Cord Blood Transplantation Symposium
Los Angeles, CA, United States

[May 24, 2006 - May 26, 2006](#)

3rd International Symposium on Hand Surgery and the Advances in Hand Therapy
Bali, Indonesia

[May 24, 2006 - May 26, 2006](#)

14th International Conference on Health Promoting Hospitals
Palanga, Lithuania

[May 25, 2006 - May 28, 2006](#)

2nd International Forum on Pain Medicine. Medical Specialties Meet Pain Medicine.
Guadalajara, Mexico

[May 26, 2006 - May 27, 2006](#)

Bethune Round Table on International Surgery
Toronto, ON, Canada

[May 26, 2006 - May 28, 2006](#)

International Congress on Glaucoma Surgery
Toronto, ON, Canada

[May 27, 2006 - May 28, 2006](#)

International Symposium of Advanced Ophthalmology
Tao-Yuan, Taiwan

[May 29, 2006 - May 31, 2006](#)

Biomed Israel 2006
Jerusalem, Israel

[May 29, 2006 - May 29, 2006](#)

Neurogenesis and Brain Plasticity
Lausanne, Switzerland

[June 07, 2006 - June 10, 2006](#)

7th International ISSPD Congress
Prague, Czech Republic

[June 08, 2006 - June 10, 2006](#)

9th International Workshop Catheter Interventions in Congenital and Structural Heart Disease
Frankfurt, Germany

[June 09, 2006 - June 12, 2006](#)

44th Pan Hellenic Paediatric Congress
Island of Rhodes, Greece

[June 11, 2006 - June 15, 2006](#)

XXI Congress of European Rhinologic Society, XXV International Symposium on Infection and Allergy of the Nose
Tampere, Finland

[June 11, 2006 - June 16, 2006](#)

10th World Congress of Child Neurology
Montreal, QC, Canada

[June 11, 2006 - June 14, 2006](#)

CARS 20th International Congress and Exhibition
Osaka, Japan

[June 12, 2006 - June 14, 2006](#)

2nd Annual International Summit on Redesigning Hospital Care
Atlanta, GA, United States

[June 13, 2006 - June 17, 2006](#)

Issls Congress: International Society For The Study Of The Lumbar Spine
Bergen, Norway

[June 13, 2006 - June 16, 2006](#)

15th International Symposium for the Psychotherapy of the Schizophrenia and Other Psychoses
Madrid, Spain

[June 14, 2006 - June 17, 2006](#)

Stanford Radiology Presents: 8th Annual International Symposium on Multidetector-Row CT
San Francisco, CA, United States

[June 15, 2006 - June 18, 2006](#)

12th International Congress on Infectious Diseases
Lisbon, Portugal

[June 16, 2006 - June 22, 2006](#)

XIV International Symposium on Atherosclerosis
Rome, Italy

[June 17, 2006 - June 19, 2006](#)

10th International Conference on Bronchoalveolar Lavage
Croimba, Portugal



[June 19, 2006 - June 22, 2006](#)

6th International Congress of Neuroendocrinology
Pittsburgh, PA, United States

[June 20, 2006 - June 22, 2006](#)

6th International Congress of Neuroendocrinology
Pittsburgh, PA, United States

[June 20, 2006 - June 23, 2006](#)

The 1st International Jordanian Forensic Medicine
Congress
Amman, Jordan

[June 21, 2006 - June 23, 2006](#)

"14th International Symposium on HIV & Emerging
Infectious Diseases" (ISHEID)
Toulon, France

[June 21, 2006 - June 24, 2006](#)

5th International Congress of Maxillofacial &
Craniofacial Distraction
Paris, France

[June 21, 2006 - June 23, 2006](#)

The 3rd Baltic Congress of Endocrinology in
association with the 21st Symposium of the Federation
of International Donau-Symposia on Diabetes Mellitus
Riga, Latvia

[June 21, 2006 - June 25, 2006](#)

13th International Congress on Oral Pathology and
Medicine
Brisbane, QLD, Australia

[June 22, 2006 - June 24, 2006](#)

3rd International WASOG Conference on Diffuse Lung
Diseases
Catania, Italy

[June 23, 2006 - June 24, 2006](#)

International Symposium Urinary Tract Infection
Weimar, Germany

[June 25, 2006 - June 29, 2006](#)

International Society for Human & Animal Mycology
Paris, France

[June 25, 2006 - June 27, 2006](#)

2nd International Meeting on Coronary
Microcirculation
Siena, Italy

[June 27, 2006 - June 29, 2006](#)

SGHG 2nd International Congress of Plastic Surgery
(The Perspectives & Advances in Aesthetic and
Reconstructive Surgery)
Jeddah, Saudi Arabia

[June 28, 2006 - July 01, 2006](#)

CARS 2006 - Computer Assisted Radiology and
Surgery - 20th International Congress and Exhibition
Osaka, Japan

[June 28, 2006 - July 01, 2006](#)

ISCAS - 10th Annual Conference of the International
Society for Computer Aided Surgery
Osaka, Japan

[June 28, 2006 - July 01, 2006](#)

IADR General Session & Exhibition (International
Association for Dental Research)
Brisbane, Australia

[June 28, 2006 - July 01, 2006](#)

Epidemiology 2006 (International Epidemiological
Association (IEA-EEF)
Utrecht, Netherlands

[June 28, 2006 - July 01, 2006](#)

CAD - 8th International Workshop on Computer-Aided
Diagnosis
Osaka, Japan

[June 29, 2006 - June 30, 2006](#)

1st International Conference on Avian Influenza in
Humans: Latest Advances on Prevention, Therapies and
Protective Measures. (Asian European Conference on
Avian Influenza 2006)
Paris, France

[June 29, 2006 - July 02, 2006](#)

9th International Symposium on Mucopolysaccharide
and Related Diseases
Venice, Italy

[June 29, 2006 - July 01, 2006](#)

VII International Society of Ocular Trauma Symposium
Rome, Italy

[July 01, 2006 - July 05, 2006](#)

12th International Symposium on Viral Hepatitis and
Liver Disease
Paris, France

[July 02, 2006 - July 05, 2006](#)

15th World Congress of the International Society for
the Study of Hypertension in Pregnancy
Lisbon, Portugal

[July 04, 2006 - July 07, 2006](#)

12th International Pain Clinic Congress - World Society
of Pain Clinicians
Turin, Italy

[July 06, 2006 - July 08, 2006](#)

International Congress of the Georgian Stomatological
Association
Batumi, Georgia



[July 08, 2006 - July 11, 2006](#)

7th International Congress on Pediatric Pulmonology
Montreal, QC, Canada

[July 10, 2006 - July 13, 2006](#)

64th Convention of the International Council of
Psychologists
Island of Kos, Greece

[July 11, 2006 - July 15, 2006](#)

VIII International Congress for Cross-Cultural
Psychology
Spetses Island, Greece

[July 12, 2006 - July 16, 2006](#)

WPA International Congress
Istanbul, Turkey

[July 12, 2006 - July 15, 2006](#)

13th Annual International Meeting on Advanced Spine
Techniques
Athens, Greece

[July 13, 2006 - July 14, 2006](#)

AICR/WCRF International Research Conference on
Food, Nutrition and Cancer
Washington, DC, United States

[July 15, 2006 - July 20, 2006](#)

10th International Conference on Alzheimer's Disease
and Related Disorders
Madrid, Spain

[July 16, 2006 - July 21, 2006](#)

26th International Congress of Applied Psychology
Athens, Greece

[July 25, 2006 - July 27, 2006](#)

The 1st International Workshop on: Human Embryonic
Stem Cells
Tehran, Iran

[July 27, 2006 - July 30, 2006](#)

4th International Symposium on Middle Ear Mechanics
in Research and Otolaryngology
Zurich, Switzerland

[July 31, 2006 - August 02, 2006](#)

International Conference Frontiers New Technology in
Medicine and Health, PET, CT Workshop and Lectures
Kuala Lumpur, Malaysia

[August 02, 2006 - August 04, 2006](#)

2nd Biennial Regional Group Conference of the
International Society for Bipolar Disorders
Edinburgh, Scotland, United Kingdom

[August 03, 2006 - August 05, 2006](#)

International Academy of Comprehensive Aesthetics
Montreal, QC, Canada

[August 06, 2006 - August 10, 2006](#)

11th International Congress of Human Genetics
Brisbane, QLD, Australia

[August 06, 2006 - August 11, 2006](#)

XI International Congress of Parasitology (ICOPA)
Glasgow, Scotland, United Kingdom

[August 09, 2006 - August 12, 2006](#)

XXXIst World Congress of the International Society of
Hematology
San Juan, Puerto Rico

[August 11, 2006 - August 12, 2006](#)

2nd International Conference on Intracranial
Atherosclerosis
San Francisco, CA, United States

[August 13, 2006 - August 18, 2006](#)

XVI International Aids Conference
Toronto, ON, Canada

[August 16, 2006 - August 18, 2006](#)

11th International Myopia Conference Singapore 2006
Singapore, Singapore

[August 16, 2006 - August 19, 2006](#)

7th International Congress Of The Asian Society For
Vascular Surgery 2006
Kuala Lumpur, Malaysia

[August 17, 2006 - August 22, 2006](#)

12th International Congress of Radiation Research
Brisbane, QLD, Australia

[August 20, 2006 - August 26, 2006](#)

The 15th International Conference on Biomagnetism
(BIOMAG 2006)
Vancouver, BC, Canada

[August 20, 2006 - August 25, 2006](#)

11th International Symposium on Microbial Ecology -
ISME
Vienna, Austria

[August 20, 2006 - August 22, 2006](#)

International Workshop on Intra-Arterial Chemotherapy
Springfield, IL, United States

[August 23, 2006 - August 26, 2006](#)

Sixth International Symposium on Coccidioidomycosis
Stanford, CA, United States

[August 23, 2006 - August 26, 2006](#)

SICOT/SIROT 2006 Fourth Annual International
Conference
Buenos Aires, Argentina

[August 23, 2006 - August 26, 2006](#)

International Association for Disability and Oral Health
Göteborg, Sweden



[August 27, 2006 - September 01, 2006](#)

17th International Mass Spectrometry Conference
Prague, Czech Republic

[August 30, 2006 - September 01, 2006](#)

13th World Congress Of The International Society For
Rotary Blood Pumps
Leuven, Belgium

[August 30, 2006 - September 01, 2006](#)

International Conference, Advances and Controversies
in Laser Medicine and Surgery
Barcelona, Spain

[August 31, 2006 - September 03, 2006](#)

International Congress of Rhinology-Otology,Skull
base Surgery: Current Concepts
Athens, Greece

[September 02, 2006 - September 06, 2006](#)

XXIVth International Congress of the ISBT
Cape Town, South Africa

[September 03, 2006 - September 08, 2006](#)

10th International Congress of Obesity
Sydney, NSW, Australia

[September 03, 2006 - September 08, 2006](#)

29th European Peptide Symposium
Gdansk, Poland

[September 06, 2006 - September 08, 2006](#)

5th International Conference on Frontotemporal
Dementias
San Francisco, CA, United States

[September 06, 2006 - September 08, 2006](#)

7th Royan International Congress on Reproductive
Biomedicine
Tehran, Iran

[September 06, 2006 - September 09, 2006](#)

15th International Congress and Endo Expo 2006
Boston, MA, United States

[September 06, 2006 - September 09, 2006](#)

XXV Annual ESRA Congress
Monte Carlo, Monaco

[September 06, 2006 - September 09, 2006](#)

31st Annual Meeting of the International
Urogynecological Association (IUGA)
Athens, Greece

[September 06, 2006 - September 08, 2006](#)

International Conference on Surgical Infections,
ICSI2006
Stockholm, Sweden

[September 07, 2006 - September 09, 2006](#)

9th International Congress of Osteology for Slovak and
Czech Doctors
Presov, Slovakia

[September 10, 2006 - September 14, 2006](#)

XXVIIIth International Congress of Clinical
Neurophysiology
Edinburgh, Scotland, United Kingdom

[September 10, 2006 - September 14, 2006](#)

6th International Congress of Neuropsychiatry
Sydney, NSW, Australia

[September 12, 2006 - September 16, 2006](#)

24th International Congress of Radiology (ICR 2006)
Cape Town, South Africa

[September 12, 2006 - September 15, 2006](#)

Congress of the Russian Dental Association, Russian
Dental Conference International Exhibition Dental-
Expo
Moscow, Russia

[September 12, 2006 - September 14, 2006](#)

6th SGHG International Otology Symposium
Jeddah, Saudi Arabia

[September 13, 2006 - September 16, 2006](#)

5th Congress of the European Federation of IASP
Chapters (EFIC)
Istanbul, Turkey

[September 13, 2006 - September 15, 2006](#)

The International Skeletal Society 33rd Annual
Refresher Course
Vancouver, BC, Canada

[September 13, 2006 - September 16, 2006](#)

The International Skeletal Society 4th Annual
Pathology Refresher Course
Vancouver, BC, Canada

[September 13, 2006 - September 17, 2006](#)

International Congress on Hormonal Steroids /
Hormones and Cancer
Athens, Greece

[September 13, 2006 - September 16, 2006](#)

5th Congress of EFIC - European Federation of the
International Association for the Study of Pain Chapters
Istanbul, Turkey

[September 14, 2006 - September 16, 2006](#)

Xth EGREPA International Conference "Physical
Activity and Successful Aging"
Cologne, Germany

[September 15, 2006 - September 16, 2006](#)

Reproduction and Malignant Disease
Barcelona, Spain



[September 15, 2006 - September 18, 2006](#)

10th International Congress of Aesthetic Dentistry
Istanbul, Turkey

[September 15, 2006 - September 17, 2006](#)

8th International Meeting on Respiratory Care
Indonesia (RESPINA 2006)
Jakarta, Indonesia

[September 15, 2006 - September 16, 2006](#)

Reproduction and Malignant disease
Paris, France

[September 17, 2006 - September 22, 2006](#)

XXVI International Congress of the International
Academy of Pathology
Montreal, QC, Canada

[September 18, 2006 - September 20, 2006](#)

16th Migraine Trust International Symposium
London, England, United Kingdom

[September 18, 2006 - September 20, 2006](#)

3rd SGHG International Neurosurgery Symposium
Jeddah, Saudi Arabia

[September 18, 2006 - September 21, 2006](#)

38th Congress of the International Society of Paediatric
Oncology
Geneva, Switzerland

[September 20, 2006 - September 22, 2006](#)

22ème Congrès International de la Société de psycho-
gériatrie de Langue Française
Lorient, France

[September 20, 2006 - September 22, 2006](#)

6th International Conference on Priorities in Health
Care
Toronto, ON, Canada

[September 21, 2006 - September 23, 2006](#)

13th International Symposium of The Mycology
Section Polish Dermatology Society "Mycology 2006"
Bialowieza, Podlaskie, Poland

[September 26, 2006 - September 26, 2006](#)

MS Academia - Multiple Sclerosis Advanced Course
Madrid, Spain

[September 27, 2006 - September 30, 2006](#)

35th Annual Scientific Meeting of the International
Society for Experimental
Minneapolis, MN, United States

[October 04, 2006 - October 07, 2006](#)

IFDAS 2006 (International Federation of Dental
Anesthesiology Societies)
Yokohama, Japan

[October 04, 2006 - October 06, 2006](#)

5th International Early Psychosis Conference - Beyond
the Crossroads
Birmingham, England, United Kingdom

[October 05, 2006 - October 07, 2006](#)

30th Annual International Aesthetic Conference
Savannah, GA, United States

[October 08, 2006 - October 12, 2006](#)

International Conference of Immunogenomics and
Immunomics
Budapest, Hungary

[October 10, 2006 - October 13, 2006](#)

2006 Mayo Clinic Alumni Association International
CME Program
Rochester, MN, United States

[October 11, 2006 - October 13, 2006](#)

6th International Symposium on Catheter Ablation
Techniques & 7èmes Journées de Travail du Groupe de
Rythmologie de la Société Française de Cardiologie
Paris, France

[October 12, 2006 - October 14, 2006](#)

IV International Plastic Surgery Course
Ekaterinburg, Russia

[October 12, 2006 - October 14, 2006](#)

2nd International Pancreatic Days
Gdansk, Poland

[October 12, 2006 - October 14, 2006](#)

5th International Congress On Spondyloarthropathies
Gent, Belgium

[October 13, 2006 - October 16, 2006](#)

International Interprofessional Wound Care Course
Toronto, ON, Canada

[October 13, 2006 - October 13, 2006](#)

IIIrd International Symposium: Scientific Paradigms
and Clinical Teaching in Medical Education
Assisi, Italy

[October 13, 2006 - October 16, 2006](#)

International Conference on Schizophrenia (ICONS)
Chennai, India

[October 14, 2006 - October 18, 2006](#)

11th Biennial International Gynecologic Cancer Society
Meeting - IGCS
Santa Monica, CA, United States

[October 14, 2006 - October 18, 2006](#)

11th Biennial International Gynecologic Cancer Society
Meeting - IGCS
Santa Monica, CA, United States



[October 15, 2006 - October 15, 2006](#)

2006 Annual Meeting & Convocation of the Academy of Dentistry International
Las Vegas, NV, United States

[October 16, 2006 - October 17, 2006](#)

The 7th International Symposium on Virtual Colonoscopy
Boston, MA, United States

[October 19, 2006 - October 23, 2006](#)

2006 International Osteoporosis Conference
Chengdu, China

[October 19, 2006 - October 21, 2006](#)

Eating Disorders 2006 The 14th International Conference on Eating Disorders
Alpbach, Austria

[October 21, 2006 - October 26, 2006](#)

CHEST 2006: 72nd Annual International Scientific Assembly of the American College of Chest Physicians
Salt Lake City, UT, United States

[October 25, 2006 - October 28, 2006](#)

6th International Congress of the World Association of Laser Therapy (WALT)
Limassol (Lemesos), Cyprus

[October 25, 2006 - October 29, 2006](#)

XXXV World Congress of the International College of Surgeons
Pattaya, Thailand

[October 26, 2006 - October 27, 2006](#)

3rd International Conference on Polyphenols Applications in Food, Pharmaceutical and Cosmetic Industries
La Valette, Malta

[October 26, 2006 - October 29, 2006](#)

Joint World Congress on Stroke
Cape Town, South Africa

[October 28, 2006 - November 02, 2006](#)

18th International Congress on Pediatrics
Tehran, Iran

[October 29, 2006 - July 02, 2006](#)

9th International Symposium on Mucopolysaccharide and Related Diseases
Venice, Italy

[October 29, 2006 - October 31, 2006](#)

International Conference on Childhood Cancer
Tehran, Iran

[November 02, 2006 - November 03, 2006](#)

Annual International Urolithiasis Research Symposium
Indianapolis, IN, United States

[November 03, 2006 - November 05, 2006](#)

Current Trends in Epilepsy: An International Symposium
New Delhi, India

[November 05, 2006 - November 08, 2006](#)

2006 Annual Meeting of the International Society for Traumatic Stress Studies
Hollywood, CA, United States

[November 06, 2006 - November 08, 2006](#)

4th SGHG International Vascular Surgery Symposium
Jeddah, Saudi Arabia

[November 07, 2006 - November 10, 2006](#)

EORTC-NCI-AACR International Conference on Molecular Targets and Cancer Therapeutics
Prague, Czech Republic

[November 09, 2006 - November 12, 2006](#)

1st International Meeting on the Treatment of Human Brucellosis
Ioannina, Greece

[November 09, 2006 - November 11, 2006](#)

The 1st International Conference on Air Travel and Health
Eilat, Israel

[November 10, 2006 - November 11, 2006](#)

ART in the 21st Century: A Time for Reflection and New Horizons - Part 2
Amsterdam, Netherlands

[November 11, 2006 - November 12, 2006](#)

RESPIRATIONS - International Clean Air Conference
Paris, France

[November 12, 2006 - November 16, 2006](#)

AACR International Conference on Frontiers in Cancer Prevention Research
Boston, MA, United States

[November 13, 2006 - November 15, 2006](#)

6th SGHG International Vascular Surgery Symposium
Jeddah, Saudi Arabia

[November 14, 2006 - November 17, 2006](#)

International Council on Women's Health Issues Congress
Sydney, NSW, Australia

[November 23, 2006 - November 25, 2006](#)

ICCA VI - 6th International Course on Carotid Angioplasty and Other Cerebrovascular Interventions
Frankfurt, Germany

[November 24, 2006 - November 25, 2006](#)

Quality Management in Reproductive Health: Challenges and Opportunities
Rome, Italy



[November 27, 2006 - December 01, 2006](#)

36th Annual Meeting of the International Continence Society
Christchurch, New Zealand

[November 27, 2006 - November 29, 2006](#)

1st International Dental & Maxillo - Facial Symposium
Jeddah, Saudi Arabia

[November 29, 2006 - December 03, 2006](#)

3rd International POSNA/AAOS Pediatric Orthopaedic Symposium
Orlando, FL, United States

[November 29, 2006 - December 03, 2006](#)

5th International Congress on Autoimmunity
Sorrento, Italy

[December 01, 2006 - December 04, 2006](#)

The British Blood Transfusion Society Annual Scientific Meeting, Telford International Conference Centre, Telford, Shropshire
Shropshire, Scotland, United Kingdom

[December 05, 2006 - December 07, 2006](#)

IDF 2006 19th World Diabetes Congress
Cape Town, South Africa

[December 10, 2006 - December 14, 2006](#)

VI International Meeting on Cancer Induced Bone Disease
San Antonio, TX, United States

[December 10, 2006 - December 13, 2006](#)

The 3rd International Jerusalem Conference on Health Policy
Jerusalem, Israel

[December 11, 2006 - December 13, 2006](#)

1st SGHG International Oncology Symposium
Jeddah, Saudi Arabia

[December 19, 2006 - December 21, 2006](#)

The 4th International Medical Congress of National Research Centre of Egypt
Cairo, Egypt

[January 15, 2007 - January 16, 2007](#)

2007 International Liver Conference
Manila, Philippines

[February 15, 2007 - February 17, 2007](#)

18th Annual International Colorectal Disease Symposium
Fort Lauderdale, FL, United States

[February 15, 2007 - February 17, 2007](#)

18th Annual International Colorectal Disease Symposium
Cleveland, OH, United States

[February 15, 2007 - February 17, 2007](#)

18th Annual International Colorectal Disease Symposium
Fort Lauderdale, FL, United States

[March 14, 2007 - March 18, 2007](#)

8th International Conference on Alzheimer's and Parkinson's Disease
Salzburg, Austria

[March 21, 2007 - March 24, 2007](#)

2007 IADR General Session & Exhibition (International Association for Dental Research)
New Orleans, LA, United States

[March 23, 2007 - March 27, 2007](#)

81st Congress of the International Anesthesia Research Society
Orlando, FL, United States

[March 24, 2007 - March 28, 2007](#)

2nd International Congress of Molecular Medicine
Istanbul, Turkey

[March 28, 2007 - March 31, 2007](#)

6th International Glaucoma Symposium
Athens, Greece

[March 29, 2007 - March 31, 2007](#)

The First International Congress on Epilepsy, Mind & Brain
Prague, Czech Republic

[March 29, 2007 - March 31, 2007](#)

4th International Symposium on Diabetes and Pregnancy
Istanbul, Turkey

[March 31, 2007 - April 03, 2007](#)

17th European Congress of Clinical Microbiology and Infectious Diseases and 25th International Congress of Chemotherapy
Munich, Germany

[April 11, 2007 - April 15, 2007](#)

2007 Annual Meeting of the International Association for Orthodontics
Tucson, AZ, United States

[April 17, 2007 - April 21, 2007](#)

2nd International Congress of the World Federation of Societies of Biological Psychiatry
Santiago, Chile, Chile

[April 18, 2007 - April 20, 2007](#)

12th International Congress on Anti-phospholipid Antibodies
Florence, Italy



[April 26, 2007 - April 29, 2007](#)

17th European Chapter Congress of the International Union of Angiology
Nicosia, Cyprus

[April 29, 2007 - May 03, 2007](#)

20 th ICAR (International Society for Antiviral Research)
Palm Springs, CA, United States

[May 03, 2007 - May 05, 2007](#)

2nd International Symposium on Cancer and the Lymphovascular System
San Francisco, CA, United States

[May 09, 2007 - May 12, 2007](#)

5th International Symposium on the Diabetic Foot
Noordwijkerhout, Netherlands

[May 16, 2007 - May 19, 2007](#)

10th Jubilee International Multidisciplinary Neuroscience Conference Stress and Behavior
St. Petersburg, Russia

[May 17, 2007 - May 20, 2007](#)

International Academy of Oral Oncology
Amsterdam, Netherlands

[June 10, 2007 - June 14, 2007](#)

4th World Congress of the International Society of Physical and Rehabilitation Medicine
Seoul, Korea, Republic of

[June 13, 2007 - June 16, 2007](#)

Stanford Radiology Presents: 9th Annual International Symposium on Multidetector-Row CT
San Francisco, CA, United States

[June 14, 2007 - June 17, 2007](#)

The 21st Congress of International Association of Paediatric Dentistry
Hong Kong, Hong Kong

[June 25, 2007 - June 30, 2007](#)

XIth International Myeloma Workshop & IVth International Workshop on Waldenström's Macroglobulinemia
Kos Island, Greece

[June 27, 2007 - June 30, 2007](#)

34th International Congress on Electrocardiology
Istanbul, Turkey

[June 27, 2007 - June 29, 2007](#)

17th International Epilepsy Symposium: Epilepsy Surgery
Cleveland, OH, United States

[June 27, 2007 - July 02, 2007](#)

13th Congress of the International Headache Society (IHC).
Stockholm, Sweden

[July 05, 2007 - July 07, 2007](#)

Stanford Radiology Presents: Joint European Conference: International Symposium on State-of-the-Art Imaging
Dubrovnik, Croatia

[July 07, 2007 - July 13, 2007](#)

21st Congress of the International Society on Thrombosis and Haemostasis
Geneva, Switzerland

[August 12, 2007 - August 17, 2007](#)

13th International Congress of Immunology
Rio de Janeiro, Brazil

[August 25, 2007 - August 30, 2007](#)

25th International Congress of Pediatrics
Athens, Greece

[September 05, 2007 - September 08, 2007](#)

16th International Congress and Endo Expo 2007
San Francisco, CA, United States

[September 17, 2007 - September 20, 2007](#)

16th International Congress and Endo Expo 2007
Las Vegas, NV, United States

[September 29, 2007 - October 02, 2007](#)

36th Annual Scientific Meeting of the International Society for Experimental Hematology
Hamburg, Germany



Congresos Nacionales 2006 (<http://www.congreca.com>)

20 Abr 2006 - 22 Abr 2006

[IV Conferencia de Mastología del Centro Clínico de Estereotaxia, CECLINES](#)

05 May 2006 - 06 May 2006

[Cumbre Odontológica Metropolitana 2006](#)

24 May 2006 - 27 May 2006

[V Congreso Internacional de Menopausia y Osteoporosis](#)

31 May 2006 - 03 Jun 2006

[V Congreso Latinoamericano de Hipertensión](#)

16 Jun 2006 - 17 Jun 2006

[II Encuentro Colombo-Venezolano de Hepatología](#)

20 Jul 2006 - 23 Jul 2006

[XXI Congreso Venezolano de Urología](#)

02 Sep 2006 - 08 Sep 2006

[LII Congreso Nacional de Pediatría](#)

19 Sep 2006 - 22 Sep 2006

[XXVII Congreso Venezolano de Gastroenterología](#)

20 Sep 2006 - 23 Sep 2006

[IX Congreso Venezolano de Nefrología](#)

25 Oct 2006 - 28 Oct 2006

[VII Congreso Venezolano de Infectología Dr. Belisario Gallegos y XIV Jornada Guayanesa de Infectología](#)

07 Nov 2006 - 11 Nov 2006

[VII Congreso Venezolano de Medicina Familiar](#)

Instrucciones a los Autores

Normas de Vancouver

Las “Normas de Estilo Vancouver” constituyen las bases para la presentación de los trabajos científicos en los Congresos Científicos Internacionales de FELSOCÉM, encontradas en los Requisitos Uniformes de Los Manuscritos Propuestos para la Publicación en Revistas Biomédicas” elaboradas por el Comité Internacional de Editores de Revistas Médicas, siendo la edición de 1997 la utilizada por el Comité Evaluador del Congreso.

A. Extensión y presentación in-extenso.

1. Se realizará en papel blanco tamaño carta (216 x 279 mm) o en la medida estándar ISO A4 (212 x 297 mm), mecanografiadas a una sola cara. El trabajo científico no excederá las 15 páginas.

2. Cada página será enumerada en el ángulo superior derecho, incluyendo la página del título y la del resumen.

3. Cada página contendrá como máximo un total de **25 líneas, a doble espacio.**

4. El tamaño de la letra será en **formato de 10 puntos.**

5. **Ningún** margen de la hoja debe ser **menor de 3 cms.**

6. Al final de cada línea no debe quedar cortada ninguna palabra.

7. Cada una de las siguientes secciones ha de comenzar en hoja aparte: página del título, resumen y palabras clave, texto, agradecimientos, bibliografía, cada uno de los cuadros, figuras y los pies o epígrafes.

8. Cualquier trabajo que no cumpla alguno de estos requisitos quedará al margen de la publicación del libro de resumen del Congreso.

B. Contenido del in-extenso.

1. Página del título

a. Título del trabajo: Claro y específico, **que no exceda las 15 palabras** con información necesaria para clasificar el artículo.

b. Nombres y apellidos de los autores.

c. Nombres y apellidos de los asesores y grado académico más importante.

d. Afiliación institucional.

e. Mes y año en que se presenta el reporte.

2. Resumen

La página del resumen debe contener el título del artículo, inmediatamente debajo deben colocarse **un máximo de 4 palabras claves**. Utilice para ello los términos de la lista **Medical Subject Headings** (MeSH) -Encabezamientos de materia médica- del **Index Medicus**; en el caso de términos de reciente aparición que todavía no estén representados en los MeSH, pueden usarse las expresiones corrientes.

El resumen constituye el contenido esencial del reporte y contiene el planteamiento del problema, metodología, resultados más importantes (proporcione datos específicos y, de ser posible, su significación estadística) y principales conclusiones. Haga hincapié en los aspectos nuevos e importantes del estudio o las observaciones. **No debe exceder de 250 palabras, no debe llevar bibliografía y debe ser redactado en forma impersonal.**

3. Introducción

- a. No debe ser mayor de 2 páginas del texto.
- b. Debe tener el problema de investigación y los artículos de apoyo teórico, objetivos e hipótesis.
- c. No incluya datos ni conclusiones del trabajo que está dando a conocer.
- d. No es recomendable que los autores expongan una introducción amplia o que trate de demostrar que los investigadores poseen gran conocimiento sobre el tema.

4. Materiales y métodos

- a. Trata de la metodología empleada por los investigadores y constituye la parte más importante del reporte.
- b. Debe incluirse el tipo de estudio, diseño del mismo y logística.
- c. Se deben incluir los **sujetos, materiales y procedimientos**.
- d. **Sujetos:** Se incluye selección muestral (criterios de inclusión, exclusión y eliminación), forma de realización del muestreo, particularidades de los sujetos (raza, edad, sexo, peso, etc.).
- e. **Materiales:** Se utiliza en trabajos realizados en laboratorios o con animales de experimentación. Debe incluir descripción de instrumentos (debe darse el nombre de aparatos y dirección del fabricante entre paréntesis), cuestionarios, validez, confiabilidad y estandarización de dichos elementos.
- f. **Procedimientos:** Debe describirse detalladamente y paso a paso lo que se hizo. **No es necesario describir procedimientos conocidos por la mayoría (Tensión arterial, etc.), sino cuál método se utilizó.** En el caso de trabajar con animales o plantas se debe anotar el nombre científico de éstos. Identifique exactamente todos los medicamentos y productos químicos utilizados, incluyendo nombres genéricos, dosis y vías de administración.
- g. **Ética:** Cuando informe sobre experimentos en seres humanos, indique si los procedimientos seguidos estuvieron de acuerdo con las normas éticas del comité

(institucional o regional) que supervisa la experimentación en seres humanos o con la Declaración de Helsinki de 1975, enmendada en 1983. Cuando dé a conocer experimentos con animales, tiene que indicar si se cumplieron las normas de la institución o de cualquier ley nacional acerca del cuidado y el uso de animales de laboratorio.

h. **Estadística:** Debe describirse el manejo estadístico de los datos, que incluye los métodos estadísticos utilizados. Siempre que sea posible se deben cuantificar los datos y expresarlos con indicadores de error o incertidumbre de la medición (Intervalos de Confianza). Proporcione detalles de los métodos de aleatorización. Si se usaron medios para enmascarar las observaciones (método ciego), descríbalos junto con la única salvedad son los documentos considerados como de dominio público.

5. Resultados

Los hallazgos obtenidos en el estudio se presentarán en esta sección.

- a. Debe ser de manera clara, concisa y sólo deben ser mencionados los datos más importantes, pues de ellos son obtenidas las conclusiones.
- b. Es óptimo que los resultados obtenidos concuerden con la hipótesis planteada, pero ello no implica que los estudios que no concuerden con la hipótesis sean estudios mal elaborados, al contrario, demuestra la honestidad por parte del investigador.
- c. Es recomendable que en la presentación de los resultados éstos sean referidos a las tablas o cuadros donde están representados y complementados.
- d. No deben ser comentados ni analizados pues esto se realizará en la siguiente sección.

6. Discusión

Es una sección muy importante pues la claridad en este punto facilitará al lector concluir la importancia del estudio.

La estructura de una buena discusión incluye:

- a. Precisar el significado de los hallazgos, supeditados a los resultados obtenidos en la investigación.
- b. Explicar los alcances de los resultados obtenidos, ampliando la información al respecto, incluso expresando inferencias adicionales de los hallazgos de investigación.
- c. Relacionar o confrontar los resultados del estudio con observaciones o experiencias previas referidas en los antecedentes, exponer las conclusiones del estudio y las implicancias presentes y futuras del mismo. **La discusión no debe ser una descripción de los resultados.**
- d. No reclamar ninguna clase de prioridad ni referirse a trabajos que aún no estén terminados. Proponer nuevas hipótesis cuando haya justificación para ello, pero identificándolas claramente como tales. Cuando sea apropiado puede incluir recomendaciones.

7. Reconocimientos

En este apartado el autor manifiesta el reconocimiento a las personas que contribuyeron a la realización del trabajo de investigación en distinta índole: moral, técnica, económica, etc.

8. Referencias bibliográficas y bibliografía

Se debe seguir las recomendaciones del **Index Medicus**. Permiten al lector profundizar sobre el tema que trata el artículo. Numere las referencias en forma consecutiva, según el orden en que aparecen en el texto.

- a. Deben incluirse las referencias accesibles eliminando fuentes secundarias, tesis, comunicaciones verbales, etc.
- b. Deben ser entre 10 y 20 referencias actualizadas con no más de 10 años de haber sido publicadas (salvo excepciones).
- c. Cuando se hagan citas, deben ser enumeradas en orden ascendente con la acotación respectiva y sólo en números arábigos.

Al hacer la cita de un libro:

- 1) Apellido inicial y nombre de cada autor seguido de una coma, finalizando con un punto.
- 2) Título del libro, escribiendo sólo la primera letra en mayúscula, finalizando con un punto.
- 3) A partir de la segunda edición se coloca de qué edición trata, seguida de un punto.
- 4) Ciudad donde se editó, seguida de dos puntos y el nombre de la casa editorial omitiendo la palabra "Editorial", seguida de una coma se coloca el año del libro y seguida de dos puntos las páginas consultadas.
Ej.: Robbins S, Cotran R, Kumar V. Patología estructural y funcional. 4a. Ed. Barcelona: Interamericana-Mc Graw-Hill, 1990: 450-482.

Capítulo de un libro:

- 1) Apellido inicial y nombre de cada autor seguido de una coma, finalizando con un punto.
- 2) Título del capítulo, escribiendo sólo la primera letra en mayúscula, seguido de la palabra In finalizando con dos puntos.
- 3) Apellido inicial y nombre de cada uno de los editores seguido de un punto.
- 4) Título del libro. A partir de la segunda edición se coloca de qué edición trata, seguida de un punto.
- 5) Ciudad donde se editó, seguida de dos puntos y el nombre de la casa editorial omitiendo la palabra "Editorial", seguida de un punto y coma se coloca el año del libro y seguida de un punto las páginas consultadas, abreviando la palabra página, seguido de otro punto y separando las páginas con un guión terminando al final con un punto.
Ej.: Phillips SJ, Whisnant JP. Hypertension and stroke In: Laragh JH, Brenner BM, editors. Hypertension: pathophysiology, diagnosis, and management. 2nd de. New York: Raven Press; 1995.p.465-78.

Al hacer la cita de una revista:

- 1) Apellido de cada autor seguido de la inicial del nombre, separados por coma (si excede 5 autores se anotarán éstos y luego las palabras et al.) y punto al final.
 - 2) Título del artículo en negrilla seguido de un punto.
 - 3) Nombre abreviado de la revista según el Index Medicus seguida del año de edición de la revista, seguido de punto y coma.
 - 4) El número de la revista seguido de dos puntos.
 - 5) Las páginas que comprende el artículo seguidas de un punto.
- Ej.: Estirado E, Arzuaga J, Roman F et al. **Absceso cerebral. Revisión clínica de 26 casos.** Rev Clin Esp 1995;195:304-307.

9. Tablas

Una tabla o cuadro nos permite presentar los datos obtenidos, elaborados de tal manera que se pueda omitir una explicación en forma de texto. Estas tablas contarán con:

- a. Cada cuadro debe presentarse en hoja aparte al final del artículo.
- b. Número de tabla, debe ir en negrilla alineado a la izquierda de la tabla y antes del título, deberá tener un orden consecutivo a lo largo de todo el trabajo, señalado por un número arábigo.
- c. Título, viene seguido del número de tabla. Deberá ser lo más claro posible y describir en forma completa la información contenida, además indicará el lugar y la fecha de origen de la información.
- d. Las categorías en las que se agrupan los datos van centradas en su columna correspondiente.
- e. No se usarán líneas verticales y sólo habrá tres horizontales, una después del título, otra a continuación del encabezado de la columna y otra al final del cuadro.
- f. Todo vacío deberá llenarse con un cero, un guión o una llamada explicativa.
- g. Pie o nota de tabla, deberá ir cuando se necesite aclarar un término. Se indicará a continuación de la línea sólida inferior.
- h. La fuente del cuadro es el último dato de la tabla.
- i. Si se incluyen datos publicados o inéditos provenientes de otra fuente, obtenga la autorización necesaria para reproducirlos y conceda el reconocimiento cabal que corresponde.
- j. No deben presentarse tablas innecesarias o no relacionadas con los objetivos de la investigación, limite el número de tablas al mínimo necesario.

10. Ilustraciones

Son las ayudas visuales de cualquier tipo (gráficos, organigramas, mapas, dibujos, fotos, etc.). Las ilustraciones deben agregar información y no duplicar la de las tablas.

- Las normas de presentación de las figuras son:
- a. Se identificarán con números arábigos.
 - b. Cada número irá precedido de la palabra figura, la cual se escribirá en mayúscula y alineada a la izquierda.
 - c. Títulos concisos y explicativos.
 - d. Deben ser claras y sencillas.
 - e. Se enviará entre hojas de cartón para protección.

- f. Deben estar identificadas por el reverso.
 - g. No se pondrán notas al pie de la figura, pero se identificará la fuente si se ha tomado de otra publicación.
 - h. Los títulos de todas las figuras se anotarán en orden numérico en una hoja de papel independiente.
 - i. En caso de fotografías, son preferibles en blanco y negro de buena calidad, identificadas en el dorso con un título claro y breve. Si la foto es de un paciente, éste no debe ser identificable; de lo contrario se deberá anexar la carta del paciente o de un familiar si éste ha fallecido que autorice su publicación posterior.
 - j. Si la figura ya fue publicada, se debe hacer el reconocimiento de la fuente original y presentar la autorización por escrito que el titular de los derechos de autor concede para reproducirla. Este permiso es necesario, independientemente de quién sea el autor o la editorial; la
- resultados que dieron. Informe sobre las complicaciones del tratamiento. Especifique el número de observaciones. Indique las pérdidas de sujetos de observación (por ej. las personas que abandonan un ensayo clínico). Debe especificarse cualquier programa de computación de uso general que se haya empleado.

11. **Abreviaturas, siglas y unidades de medidas**

Utilice únicamente abreviaturas ordinarias. **Absténgase de usar abreviaturas en el título y el resumen.**

- a. Si se menciona por primera vez deben estar acompañadas de su significado y luego entre paréntesis la abreviación.
- b. Deben ser escritas solamente en español, a menos que sean siglas que se acepten como nombres. Ej.: ELISA.
- c. Las unidades de medida deben ser las correspondientes al Sistema Internacional (SI). Los símbolos de las unidades no toman la terminación en plural y sólo van seguidos de punto en caso de que se encuentren al final de la frase.
- d. Las cifras deben agruparse en tríos dispuestos a la derecha e izquierda de la coma decimal y separadas entre sí por un espacio simple. No deben separarse por ningún signo de puntuación.