

## EDITORIAL

# Problems in Publishing Clinical Studies on Paediatric Orthopaedics in South-East Asian Region

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*Paediatrics, South East Asia, Clinical Studies, Orthopaedics*

In most developing countries, children contribute a relatively large proportion of the population, and their problems are commonly related to malnutrition, infection and trauma. This is in contrast with the scenario in most developed countries where geriatric patients with degenerative problems are becoming the main concern. When we focused on medical and health problems in children, there are significant differences between developed and developing countries. Geographical location, family structure and cultural practices are among the factors that contribute towards the disease pattern and sometimes influence the treatment option. However, most publications on paediatric orthopaedic problems especially those in established medical journals are based on paediatric population in developed countries.

### DISEASE PATTERN

In temperate countries, injuries in children are most common in summer when they spend significant amount of time outdoors<sup>1</sup>. In tropical countries, there is generally no seasonal variation in occurrences of fractures. Injuries resulting from sports activities are more common in developed countries<sup>2</sup> and most of these children will receive immediate medical attention. On the other hand, in developing countries, many of these patients may present late for several reasons. Traditional medicine is considered by many as part of their cultural inheritance (a common practise in South-East Asia, Africa and many other developing regions). Many children with closed fractures will come to hospital days or sometimes weeks after the initial injury because they were brought to see the traditional healers first<sup>3</sup>. Other factors including lack of doctors or facilities like radiography may also contribute towards the delay. In relation to clinical studies, this factor often makes it difficult to enrol patients when a limited time from injury to consultation is part of the inclusion criteria, or when there is no early radiographic image of the fractures. Both acute and chronic infection of bones and joints are still common in developing countries. Some patients may present with uncommon symptoms or signs that may delay the eventual

diagnosis and treatment. For example the case report in this issue by Krishnan *et al* on a child with chronic gluteal abscess that eventually turned out to be tuberculosis. The treatment and favourable outcome serve as a reminder for clinicians managing bone and joint infection. With newer generations of antibiotics, we would expect simpler protocols with more favourable outcome to be available but there seems to be very little publication on this subject.

### FACILITIES FOR INVESTIGATION AND TREATMENT

Most district or provincial hospitals in South-East Asia providing orthopaedic services do not have advanced imaging facilities like CT scan or MRI. On the other hand, some families of children sustaining fractures are reluctant to allow their children to be transferred to bigger hospitals even if the cost of treatment is low. The parents fear losing the social support from their extended families or their neighbours once they are in another town. Percutaneous pinning under guidance of image intensifier for supracondylar fractures of the humerus has been considered the standard treatment in developed countries. Although we do not have accurate information on availability of intra-operative radiography in South-East Asia, we estimate that probably half of the fractures in this region were treated without an image intensifier. Is blind percutaneous fixation an option? In 1974 Flynn *et al*<sup>4</sup> reported good results but cautioned that it was difficult to master this technique. What about open reduction without image guidance? A more recent article by Gurkan *et al*<sup>5</sup> concluded that the functional outcome based on Flynn criteria is slightly inferior in those treated openly. A small series of seven open supracondylar fractures treated by open reduction and percutaneous pinning by Megaputera in this issue showed excellent outcome in all cases. Although this is a very common clinical problem faced by many clinicians in this region, there are very few publications addressing this issue. For bone and joint infection, facilities to diagnose and to monitor the disease with investigations like polymerase chain reaction may not be available in many areas despite the large number of bone and joint infections. Despite the large number of cases available, they may not have all the laboratory investigations or radiographic images that are required for a good study and thus not considered for publication.

## **COST CONSIDERATIONS**

Cost is another factor that influences the treatment option in many paediatric orthopaedic conditions. Treatment of femur fracture is one example. Internal fixation is becoming popular due to increasing cost of hospital stay, even if it involves repeated surgery (for removal of implants). In many developing countries, hospitalization is not a problem because the hospital stay is inexpensive compared to surgery. For families with many children and with both parents working, the relatives and even neighbours will help to support the hospitalised child. Expensive implants and instruments are also not freely available in many areas and as a result some clinicians developed innovative methods of managing various common and rare conditions. The bamboo osteotomy of creating an incomplete fracture for managing Blount disease as reported in this issue by Siregar is one example.

## **ORTHOAEDIC SURGEON TO PATIENT RATIO**

The ratio of orthopaedic surgeons to the general population in South-East Asia varies significantly. Distribution of medical expertise is another problem especially in island nations like the Philippines and Indonesia. In rural areas, many doctors are occupied with their public and private practices and there is hardly any time or resources available to review the treatment outcome of their own patients or report even the most interesting cases. In addition, many patients do not return for follow-up. Although the medical specialty organizations and respective governments are taking efforts to improve the situation, it may take years before a better working environment becomes more conducive for conducting clinical studies and more avenues for publication can be made available.

## **DISCUSSION**

Over the last few years, there is increasing awareness for the need to publish clinical and basic science papers among the clinicians in South-East Asia. This is partly contributed by the availability of internet services and the increasing number of open access online medical journals. One of the main roles of a medical journal is to provide a platform for clinicians to share their experiences and provide guidelines especially for conditions related to the local or regional community. With advances in telecommunication and globalization, established medical journals should be more sensitive to the needs of the developing world and recognize the limitations in the manuscripts submitted for publication. The World Health Organization (WHO) has initiated the Western Pacific Region Index Medicus (WPRIM)<sup>6</sup> to select medical and health journals for indexing and raise the level of publishing in the Western Pacific region.

Finally, all effort would not be successful without the participation of the local clinicians. Clinicians should recognize their role in improving the overall standard of medical and health services in the region and put additional effort to conduct or participate in clinical studies. They should attempt to minimize potential bias in enrolling the cases (either prospectively or retrospectively), standardize the treatment method used in treatment, report the results as accurately as possible and declare the limitation of their studies.

Neglected trauma is common in many developing regions of the world. We need to publish the outcome of our treatment as a means to inform and guide others. For those interested in learning more about publication, training courses are always available at regional or international levels<sup>7,8</sup>.

**REFERENCES**

1. Masterson E, Borton D, O'Brien T. Victims of our climate. *Injury* 1993; 24: 247.
2. Kaye EW. Chapter 1. Incidence of fractures in children. [http://www.lww.com/static/docs/product/samplechapters/978-0-7817-5769-0\\_Chapter%201.pdf](http://www.lww.com/static/docs/product/samplechapters/978-0-7817-5769-0_Chapter%201.pdf). Accessed on 28th Feb 2010.
3. A Dada, S O Giwa, W Yinusa, M Ugbeye, S Gbadegesin. Complications of treatment of musculoskeletal injuries by bone setters. *West Afr J Med*. 2009; 28 (1): 38-42.
4. Flynn JC, Matthews JG, Benoit RL. Blind Pinning of displaced supracondylar fractures of the humerus in children: sixteen years experience with long-term follow-up. *J Bone Joint Surg* 1974; 56A: 263-72.
5. Gurkan O, Ugur G, Asim K, Kursat T, Tulay TK. Displaced supracondylar humeral fractures in children: open reduction versus closed reduction and pinning. *Arch Orthop Trauma Surg* 2004; 124: 547-51.
6. World Health Organization website, regional office for the Western Pacific. <http://wprim.wpro.who.int/SearchBasic.php>. Accessed on 28th Feb 2010.
7. Medical writing workshop during Singapore Medical Journal Golden Jubilee Conference 6th to 8th November 2009. <http://smj.sma.org.sg/goldenjubilee/home/index.htm>. Accessed on 28th Feb 2010.
8. Course for medical publication for clinicians by Malaysian Orthopaedic Association on 16th and 17th January 2010. <http://www.moa-home.com/files/Medical%20Publication%20for%20Clinicians%20Jan10.pdf>. Accessed on 28th Feb 2010.