

Are we Practicing Evidenced Based Medicine for Common Paediatric Problems?

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Every truth is relative to the time and knowledge that is acquired, needs to be refreshed timely. This is especially true for medical science. When a student enters into a medical college and comes out from it there would be an approximate gap of five years. Many a times the knowledge that has been acquired changes. Many a times a medical graduate continues to apply the same knowledge even after ten or twenty years of his graduation. The system, in this country never felt the responsibility of doing compulsory continued medical education (CME). This scenario was also true in many western countries but they felt the need of refreshing the acquired knowledge at medical school and timely started compulsory CME. Applying the acquired knowledge in patient care for better outcome is one of the most important features of medical education. If the acquired knowledge is out of date and applied, the outcome may not be optimal. This is where the concept of Evidenced Based Practice started. Many of us are familiar with this Evidence Based Medicine (EBM) and thanks to the World Health Organization's HINARI initiative, because of which we can update our knowledge in this country.

We read recent articles, especially those with randomized double blinded trials and meta-analysis of these studies and the results we say is level I. We also look the Cochrane data base and try to find out whether the knowledge that we acquired at medical school is still true or not. Many times although there are enough evidences to change our practice, but we are reluctant to follow the rules, maybe because of some fear in our heart, which frankly speaking; I do not know what it is? The best example for this is cough mixtures, vitamins, antibiotics in a child with or without signs of pneumonia.

1. Antihistamines in monotherapy in children as well as in adults; do not alleviate to a clinical extent the symptoms such as nasal congestion, rhinorrhoea and sneezing, or subjective improvement of the common cold. First generation antihistamines also cause more side-effects than placebo; in

particular they increase sedation in cold sufferers. Combinations of antihistamines with decongestives are not effective in small children. In older children and adults most trials show a beneficial effect on general recovery as well as on nasal symptoms. However, it is not clear whether these effects are clinically significant¹.

WHO has removed all cough mixtures from the essential drugs list, there is little doubt that relief is offered by these preparations. It is estimated that every year approximately more than eight hundred million rupees is spent to buy cough mixtures in under-five year old children which is often more than the country's budget for child health². But we continue to prescribe these medicines and because of our practice, patient and guardians continue to have this over the counter. When will we stop this?

2. There were many studies each investigating multiple antibiotics with different methodologies. For treatment of ambulatory patients with Community Acquired Pneumonia, amoxicillin was better than co-trimoxazole; there was no difference between azithromycin and erythromycin, or between cefpodoxime and co-amoxiclavulanic acid³.

Although these statements is generated by looking at the Randomized Controlled Trials which we call Level I evidence, but we continue to use costly drugs (cefpodoxime, co-amoxiclavulanic acid) for outpatient clinics and to children with non-severe pneumonia without thinking whether the caretaker can afford it or not?

3. There is insufficient evidence of benefit to warrant the use of antibiotics for upper respiratory tract infections in children or adults. Antibiotics cause significant adverse effects in adults⁴.

In a study of 100 prescriptions with the diagnosis of Upper Respiratory Tract Infections, it was found that 97% of prescriptions from OPD had antibiotics⁵. It is obvious that still we prescribe

antibiotics for nasopharyngitis. Overuse of antibiotics and this practice of professionals often motivate the medical shop counter people to give antibiotics whenever someone asks medicine for fever with cough.

4. A two to four days course of oral antibiotics appears to be as effective as 7-14 days in eradicating lower tract UTI in children⁶.

Still most of the prescriptions for the Urinary Tract Infection (UTI) contain antibiotics for seven to ten days. It not only increases the possibility of increasing bacterial resistance but the financial burden to the family.

Let us ask ourselves when are we going to change our practice with the evidences we read as EBM? When will the health system include a compulsory CME for medical professionals in this country? It is high time for teaching institutions to start compulsory CME for optimal care of patients and education of its students.

References

1. De Sutter AIM, Lemiengre M, Campbell H. Antihistamines for the common cold. *Cochrane Database of Systematic Reviews* 2003, Issue 3. Art. No.: CD001267. DOI: 10.1002/14651858.CD001267.
2. Sharma PR. Editorial: Why we still prescribe cough mixtures to children? *Journal of the Nepal Paediatric Society*. Vol. 21. Issue 1
3. Kabra SK, Lodha R, Pandey RM. Antibiotics for community acquired pneumonia in children. *Cochrane Database of Systematic Reviews* 2006, Issue 3. Art. No.: CD004874. DOI: 10.1002/14651858.CD004874.pub2.
4. Arroll B, Kenealy T. Antibiotics for the common cold and acute purulent rhinitis. *Cochrane Database of Systematic Reviews* 2005, Issue 3. Art. No.: CD000247. DOI: 10.1002/14651858.CD000247.pub2.
5. Sharma PR. Treating Paediatric Pneumonia: Practice and Evidence. 2008. General Practice Association of Nepal Conference. Paper Presented.
6. Michael M, Hodson EM, Craig JC, Martin S, Moyer VA. Short versus standard duration oral antibiotic therapy for acute urinary tract infection in children. *Cochrane Database of Systematic Reviews* 2003, Issue 1. Art. No.: CD003966. DOI: 10.1002/14651858.CD003966.