Why Quantity of Diphtheria and Pertussis Vaccines is Reduced for Children 7 Years Onwards?

The quantity of inoculum is same in case of majority of vaccines whether administered to small children, older children or adults. In case of influenza vaccine and Japanese encephalitis vaccine, dose of inoculum is half for children below 3 years. Similarly, quantity of hepatitis A vaccine and hepatitis B is half for children.

Whole cell pertussis vaccine is not recommended after 7 years of age because of high incidence of adverse effects. Why dose of diphtheria antigen and acellular pertussis vaccine are reduced while not reducing the quantity of tetanus antigen for children 7 years onwards?

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REPLY

The pediatric formulations usually have 3-5 times as much of the diphtheria component than what is in the adult/ adolescent formulation. Similarly, the formulations for adults/adolescents have around one third of acellular pertussis content than pediatric formulations. The amount of tetanus toxoid in each of the products remains almost equivalent. Dose reduction for diphtheria and pertussis is necessary because of the increased incidence of local and systemic reactions particularly to diphtheria toxoid and to some extent to acellular pertussis component in older children and adults [1-4].

On the other hand, the immune response to tetanus toxoid appears to decrease with increasing age. In comparative studies, children generally will develop higher levels of antitoxin than adults [5]. These are the reasons why dose of tetanus toxoid is not reduced in adult formulations.

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Kawasaki Disease in Association with Urinary Tract Infection

We have few comments on the report by Husain, *et al*. [1]. Apart from two case reports of the association, a retrospective cohort study by Jan, *et al*. [2] on 285 patient with Kawasaki disease(KD), reported the incidence of bacterial pyuria as 10.7%.

As urine microscopy and culture forms the basis of diagnosis in infant <3 months, complete urine microscopic examination is not mentioned. How urine was collected for culture is not mentioned? Latter has to be either by suprapubic aspiration/transurethral catheterization. Urine nitrite test could have been followed with urine leucocyte esterase test. Urine culture still forms the gold standard for diagnosis of UTI as urine nitrite test can have false positives with positive predictive value of 50-83%. Why was blood culture not included as a part of septicemic work-up?

As per latest guidelines on management of UTI, infant should have DMSA study done apart from USG and MCU [3]. A prospective study by Jieh, *et al*. [4] on 50 KD patients reports that to assess the renal inflammation and its sequelae (incidence 46% in KD patients) DMSA should be included in diagnostic work up. They have concluded that the potential longterm clinical impact of KD is not limited to coronary artery lesion sequelae but also includes renal scar formation [4]. Lastly, last sentence which says KD should be one of the differential diagnoses in patients who are suspected of having UTI and do not respond to