

sternocleidomastoid during a difficult labor when it undergoes ischemic necrosis and contracture. The occiput is deviated towards the ipsilateral shoulder and chin is deviated towards the contralateral side. The other common causes include cervical lymphadenitis causing reflex spasm of sternocleidomastoid and dystonic side effects of some drugs like phenothiazines, metoclopramide, haloperidol, carbamazepine and phenytoin. Congenital cervical spine and craniovertebral region abnormalities are the true congenital reasons of torticollis. Post-burn contractures and neoplastic lesions of posterior cranial fossa and spinal cord can be the other causes. Benign paroxysmal torticollis is a self-limiting condition in infants characterized by episodes of head tilting.

Injuries to cervical spine in children are very uncommon and account for 1% of paediatric fractures and 2% of all spinal injuries [1]. These children have high mortality rates because of associated lethal head injuries [1,2]. Cervical spine injury in the 0-2 year age group occur mainly at C<sub>1</sub> – C<sub>2</sub> level [3]. There are many anatomical reasons for this difference. Younger children have relatively large head size, increased ligament laxity, poor musculature, anterior wedging of cervical vertebral bodies, horizontally oriented facet joints and a higher fulcrum at C1 – C2 [2]. We could not find a similar case in

the English literature where the patient had an isolated fracture of C2 lamina without neurological deficit in infancy. We also could not find any report of pediatric cervical spine injury where torticollis was the presentation. This report highlights the fact that the survivors of upper cervical spine injury can present with very subtle signs and symptoms, including torticollis. It is important to screen the cervical spine before excluding any injury to this part. Most of these fractures when detected early can be managed non-operatively and usually have a favorable outcome.

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## Screening for Heart Disease at Birth

We read with great interest the recent article by Balu, *et al.* [1]. However, in methodology, sample size considerations and calculations have not been mentioned.

As the sensitivity of gold standard has been mentioned as 88%, we calculated the sample size for 80% with a deviation of 5% on either side and the calculations show that sample size in this study is woefully inadequate [2]. Thus the study was inadequately powered to assess the validity of the proposed screening tests. As PPV depends upon prevalence, likelihood ratio is a better measure to overcome this inadequacy which has not been calculated in this study. Authors also state that more training (how much) would be required to get a better result, which raises the question of internal validity. In the diagram describing association of pulse oximetry with clinical evaluation and

echocardiography it seems that all newborns went through pulse oximetry first followed by clinical examination but authors initially mentioned the reverse sequence. The appropriate sequence of clinical examination followed by oximetry has also been described earlier [3].

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