Spinal Congenital Dermal Sinus

TO THE EDITOR: I read with great interest the article by Dr. Kara (Kara NN: Spinal congenital dermal sinus associated with upper thoracic meningocele. Case report. *Neurosurg Focus* 15 (1):Clinical Pearl 2, July, 2003). I was proud to see another publication from the city in which I live. The author has nicely documented the unique case of an adult with dermal sinus tract (DST) associated with meningocele; unfortunately, however, certain aspects require careful inspection.

Abstract

The congenital dermal sinus is an abnormal epithelium-lined sinus tract between the skin surface and deeper tissues. It occurs during neurulation when the neural groove closes to form the neural tube on Day 26 of gestation and results from a failure of neuroectoderm to separate from the cutaneous ectoderm. The most frequent location is the lumbosacral area; an upper thoracic location is quite rare.

This 37-year-old man presented with headache and numbness in both arms. No specific neurological findings were observed. Physical examination revealed a dimple at T-2. Radiography and magnetic resonance imaging of the thoracic spine revealed spina bifida at T1-3, a meningocele, and a dermal sinus tract complex. The treatment approach and outcome in this unusual case are presented.

As the author stated, thoracic DSTs are unusual focal nondysjunctional anomalies resulting from incomplete separation of neuroectoderm from cutaneous ectoderm, and a review of the world literature revealed 32 thoracic cases.^{1,2,5} I thought the following should be clarified for the sake of completeness. Neurological status is reportedly normal in children, but the chance of neurological deficits increases as the patient ages.⁵ For this reason, it seems that the author's claim that adults are generally asymptomatic is not true, as happened in his symptomatic case.

In Fig. 2, the axial magnetic resonance (MR) image should be T₂-weighted, not T₁-weighted. Moreover, the statement "... at the T₂-weighted level" may create confusion and/or misunderstanding. In fact, in this case I think that the exact termination point of the sinus tract coursing "obliquely" through the subcutaneous tissues should be T-3 instead of T-2, where the intradural area becomes attached with meningocele sac in the midline, as clearly demonstrated in Figs. 2 and 3. As Barkovich, et al.,³ have pointed out, however, I certainly think it is important to know that the dermatome level of the sinus opening correlates with the metameric level of the spinal cord where it attaches.

Some information provided in the abstract is not included in the rest of the paper. In fact, this is contrary to scientific notion that the abstract in a scientific journal should give a very short summary of the main contents of the entire work.⁴

Last, I call your attention to many significant omissions from the article; it is the author's responsibility to keep abreast of related medical information. These omissions

involve the uncited historical studies of McIntosh, et al.,⁶ and Powell, et al.,⁷ in which the incidence of DSTs is quoted as one in 2500 live births in the *Introduction* of the paper. It would be worthwhile to refer to these studies, although case reports in the *Journal of Neurosurgery* should be brief and not include an extensive review of the literature. Indeed I think that a few additional papers in the reference list should be tolerated by the Editorial Board of the *Journal of Neurosurgery*, because the loyalty to the original studies is an important issue in scientific papers. In my opinion, another representative omission—that of Verebely, who first described this entity in 1913—also warrants an explanation.

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References

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RESPONSE: I would like to thank Dr. Turgut for his response to my paper; however, a few assertions require refutation.

In the literature that Turgut cites, the incidence of adult spinal congenital dermal sinus associated with upper thoracic meningocele is rarely stated and this can be determined by examining closely the literature.^{1–5} The complaints and symptoms in my case appeared late. This is also true for the cases reported in the literature. It is suggested that this condition is asymptomatic in pediatric patients, yet responsible for extensive neural defect in adulthood.^{1,6}

In Fig. 2 the axial MR image was T₂-weighted, not T₁-weighted. I think it was mislabeled and should be corrected. In the sagittal MR image, the DST starts at T-2; it can be seen if closely examined. The physical examination

and intraoperative results were also the same. I do not think it worth discussing whether the dermal sinus starts at T-2 or T-3, because it does not have any effect on the literature.

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