

spondyloepiphyseal dysplasia tarda, and campomelic dysplasia deserve further comment.

The authors state in the appendix that patients with pseudoachondroplasia have normal cervical spines. This is in direct contradiction to one of the cited appendix references² and also conflicts with earlier work by one of the authors.⁵ In both of these references, odontoid hypoplasia is noted in pseudoachondroplasia, and Perovic *et al.*⁵ reported that three of their four patients with this combination of findings had cervical spine instability. Similarly, patients with diastrophic dysplasia and spondyloepiphyseal dysplasia tarda are noted by Berkowitz *et al.* as having normal odontoid processes or completely normal cervical spines, respectively.¹ Odontoid hypoplasia and its attendant problems are less common in these patients than in those with one of many other types of disproportionate dwarfism, but they have been reported.^{2,4} Other cervical spine problems are mild but may progress over time.⁵ Finally, patients with campomelic dysplasia virtually always have cervical spine problems, often severe.⁶ Preoperative evaluation of the cervical spine, including complete odontoid evaluation, is important in all of these patients,⁷ especially considering the likelihood of difficult intubation. Practitioners encountering a patient with any disproportionate dwarfism are well advised to be extremely conservative in their approach to the cervical spine and to intubation.

STEVE M. AUDENAERT, M.D.
Assistant Professor of Anesthesiology and Pediatrics

Anesthesiology
74:1173, 1991

In Reply:—Dr. Audenaert has correctly pointed out misquotations in the appendix of our review¹ in regard to cervical spine abnormalities of patients with pseudoachondroplasia, diastrophic dysplasia, spondyloepiphyseal dysplasia, and campomelic dysplasia. We agree with his comment that the preoperative evaluation of the cervical spine is important in the above groups of patients as well as in other patients with disproportionate dwarfism.

IVOR D. BERKOWITZ, MB.B.CH.
SRINIVASA N. RAJA, M.D.
KAREN S. BENDER, M.D.

Anesthesiology
74:1173–1174, 1991

An Aid for Simultaneous Instructor and Trainee Viewing of Orotracheal Intubation

To the Editor:—Tracheal intubation is among the most important techniques that anesthesia trainees learn during graduate medical education. Yet anyone who has attempted to teach this skill and to view laryngoscopy from a distance (*e.g.*, over the shoulder) knows how difficult it is to confirm just exactly what the student is visualizing. We report a simple modification of readily available tools that will assist those teaching laryngoscopy and tracheal intubation while affording a continuous and direct view of the procedure.

A standard curved laryngoscope blade is modified (fig. 1) by drilling two sets of 1.5-mm holes to allow attachment of an intubating fiberoptic bronchoscope (Olympus LF-1). Each parallel set of holes is 4–5 mm apart, with the sets distanced 5 and 9 cm from the tip of the blade.

*University of Kentucky Medical Center
and Shriner's Hospital for Crippled Children
Lexington, Kentucky 40536-0084*

REFERENCES

1. Berkowitz ID, Raja SN, Bender KS, Kopits SE: Dwarfs: Pathophysiology and anesthetic implications. *ANESTHESIOLOGY* 73: 739–759, 1990
2. Wynne-Davies R, Hall CM, Apley AG: Atlas of Skeletal Dysplasia. Edinburgh, Churchill Livingstone, 1985
3. Perovic NN, Kopits SE, Thompson RC: Radiological evaluation of the spinal cord in congenital atlanto-axial dislocation. *Radiology* 109:713–716, 1973
4. Weinfeld A, Ross MW, Sarasohn SH: Spondylo-epiphyseal dysplasia tarda: A cause of premature osteoarthritis. *Am J Roentgenol* 101:851–859, 1967
5. Langer LO: Spondyloepiphyseal dysplasia tarda. *Radiology* 82: 833–839, 1964
6. Hall BD, Spranger JW: Campomelic dysplasia. *Am J Dis Child* 134:285–289, 1980
7. Wynne-Davies R, Hall CM, Apley AG: Skeletal dysplasia group: Instability of the upper cervical spine. *Arch Dis Child* 64:283–288, 1989

(Accepted for publication March 20, 1991.)

*Department of Anesthesiology
The Johns Hopkins Hospital
600 North Wolfe Street
Baltimore, Maryland 21205*

REFERENCE

1. Berkowitz ID, Raja SN, Bender KS, Kopits SE: Dwarfs: Pathophysiology and anesthetic implications. *ANESTHESIOLOGY* 73: 739–759, 1990

(Accepted for publication March 20, 1991.)

The fiberoptic bronchoscope is attached loosely through these holes with rubber bands, still allowing some flexion of the scope's tip.

Assembled prior to induction, the blade is attached to a standard handle and the bronchoscope attached to a light source. Once placed into the oropharynx by the student, the teacher may follow exactly where the laryngoscope travels. No oral airway is required to protect the fiberoptic attachment, since the laryngoscope prevents jaw closure. Several advantages are noted with this apparatus: Lighting conditions are supplemented by the attached fiberoptic light source compared to the traditional battery handle, providing maximal viewing. The teacher can scan (roughly a 75° field of view with a 240° arc, for the Olympus LF-1) the periglottic area to note abnormalities the student might miss,