

of the prostate (TURP) in which he referred to "burning in the ears" and "burning on the face" during TURP.

I have not encountered any patients with these symptoms; however, similar symptoms have been reported in conjunction with the TURP syndrome. "A tight feeling in the throat",<sup>1</sup> "numbness and tingling of the arms",<sup>2,3</sup> "numbness of the mouth",<sup>4</sup> "paraesthesias of jaws and shoulders",<sup>4</sup> and "facial warmth"<sup>5</sup> have been reported. The acute alterations in electrolyte concentrations that occur with intravascular absorption of irrigating fluid will influence chemical and electrical gradients across cell membranes, leading to changes in behaviour of excitable tissue.<sup>6</sup> Paraesthesias are not common with hyponatraemia alone, but the earliest symptoms of hypocalcaemia are frequently sensory.<sup>6</sup> Tingling and burning are felt in the extremities and about the lips and tongue.<sup>6</sup> Spasm of the laryngeal muscles frequently accompanies hypocalcaemia<sup>6</sup> and could explain the feelings of throat tightness. A decrease in serum calcium concentration has been noted in association with hyponatraemia during TURP.<sup>7</sup> I have not found a report in which the patient had paraesthesias in whom the ionized calcium concentration was measured and determined to be decreased. One patient complained of "numb arms" and was found to have a 45% decrease in serum albumen,<sup>2</sup> likely the ionized calcium concentration was decreased concurrently.

When glycine was infused into normal volunteers, nausea, vomiting, headache and fever were reported, but not paraesthesias.<sup>8</sup> The differential diagnosis of these aberrant symptoms should include the auditory and ocular symptoms associated with spinal anaesthesia, and the skin changes associated with allergy.

My conclusion is that the acute electrolyte concentration changes of the TURP syndrome may lead to aberrant symptoms.

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## Paediatric epidural catheter connector problems

To the Editor:

Until recently the Alberta Children's Hospital, Department of Anaesthesia Pain Service, had been plagued with many unnecessary troubleshooting calls. Leaking or blocked epidural catheters at the level of the infusion connector were often the problems requiring attention. The "Snap Connector" and "Tuohy Borst Adaptor" styles of connectors supplied by the catheter manufacturer (Preferred Medical Products) were found to be prone to leakage or to occlusion by crimping the catheter when tightened. The probability of finding the happy medium between leakage and occlusion has been frustratingly low.

We have found that carefully threading the end of the epidural catheter onto the needle of an appropriately sized "butterfly" style winged infusion set has all but eliminated any connector-related problems. A 27-gauge and a 25-gauge butterfly needle are used successfully with a 24-gauge and a 20-gauge catheter respectively. Replacing the protective needle cover sheath from the butterfly set over the catheter-needle connection (threading the catheter through the sheath and then onto the needle, Figure) protects the catheter from shearing by the needle if lateral tension occurs at the connection. The relatively flat configuration of the winged infusion set allows it to be secured nicely with a clear occlusive dressing to the patient.

We have had good success with this technique and would invite comments for improvement of this or on any other successful technique.

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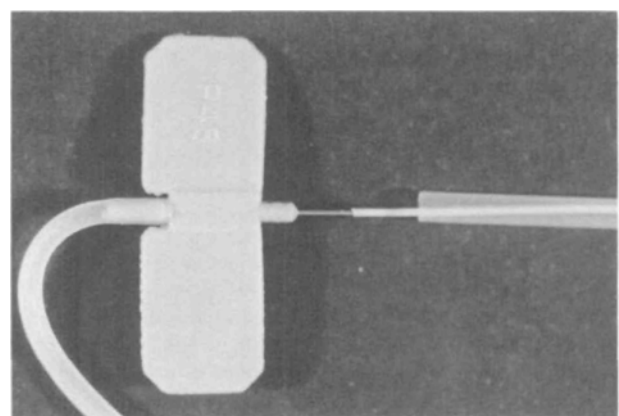


FIGURE Butterfly needle, 27 gauge, inserted into 24-gauge catheter. Needle cover slides up to protect the catheter from shearing.