

pigmented patients in whom bolus injections of the dye have been administered.

Practicing anesthetists should be aware of the potential influences of intravenously administered dyes on SO_2 monitor readings so that operating room time is not wasted and more invasive analysis not undertaken, *e.g.*, arterial blood gases, should falsely low SO_2 readings be temporarily induced by administration of these dyes.

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Common Peroneal Nerve Palsy Associated with the Fabella Syndrome

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Most cases of postoperative nerve palsy result from malpositioning of the patient on the operating table, with consequent stretching or compression of nerves.¹ We describe an unusual postoperative common peroneal nerve palsy in a patient maintained in the supine position during surgery.

REPORT OF A CASE

A 50-yr-old woman was scheduled for elective exploration of the common bile duct. Her past history was unremarkable except for cholelithiasis and a cholecystectomy. Physical examination and laboratory tests, including analysis of arterial blood gases, were within normal limits. Her body height was 147 cm and body weight 44 kg. The electrocardiogram revealed normal sinus rhythm with flattening of the T wave in leads II, III, aVf, V₅, and V₆. She received secobarbital 75 mg, atropine 0.5 mg, and meperidine 17.5 mg, im for premedication. Anesthesia was induced with thiopental 250 mg and pancuronium 4 mg, iv. Following endotracheal intubation, anesthesia was maintained with enflurane, nitrous oxide, and oxygen. Respiration was manually controlled or assisted throughout the operation. Removal of intrahe-

patic stones and transduodenal sphincteroplasty was performed. She was in the supine position with a leg strap applied tightly above her knees without knee supports for 6.25 h. The trachea was extubated when she was fully awake at the termination of surgery. In the immediate postoperative period, she complained of pain on the dorsum of her right foot. No trauma to the foot was found.

On the afternoon of the first postoperative day, the patient noticed weakness of the foot on walking to the lavatory. On the third postoperative day, she complained of numbness and inability to dorsiflex the foot; the pain had subsided slightly. Neurologic examination revealed complete paralysis of all muscles innervated by the common peroneal nerve. The lateral aspect of the leg and dorsum of the foot had no sensitivity to pin prick. A mass (5 × 5 mm) was palpable on the posterolateral aspect of the right knee. Localized tenderness and pain, present over the common peroneal nerve, were accentuated by direct pressure on the mass. A lateral roentgenogram of the knee showed the presence of a fabella (fig. 1). An electromyogram was suggestive of a compression syndrome. Her orthopedic surgeon recommended excision of the fabella, but the patient refused; subsequently physiotherapy was instituted. On the 28th postoperative day, an electromyogram revealed volitional motor unit potential with fibrillatory potential of tibialis anticus, the peroneus, and extensor digitorum muscles. Nerve conduction on the common peroneal nerve from proximal to the fabella to the ankle was 21.0 m/s and between fibular head and ankle was 37.8 m/s, indicative of delayed conduction velocity at the site of the fabella. On the 84th postoperative day, all muscles innervated by the common peroneal nerve revealed modest recovery of motor strength from grade 0 to 3 on manual muscle testing and slight recovery from numbness of her right leg and foot.

DISCUSSION

Britt¹ asserted that the common peroneal nerve is the most frequently damaged nerve in the lower limb. The

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mechanism involves compression against the head of the fibula in the lithotomy position and stretching by flexion of the hips and knees. The neck of the fibula rubs against the vertical brace from which the supporting foot strap is slung or against a curved metal support beneath the knee. Damage to the common peroneal nerve may also follow undue, prolonged pressure against a poorly padded table with the patient in the lateral position. In the supine position, similar injury may be produced by unyielding supports beneath the knee. Our patient had only a leg strap tightly applied above the knees that compressed the fabella against the common peroneal nerve. In the present case, all mechanical factors relating to peroneal nerve palsy could be ruled out other than the presence of the fabella.

Weiner *et al.*² described the fabella (little bean) as a sesamoid bone embedded in the tendinous portion of lateral head of the gastrocnemius muscle. Its occurrence is about 12%. The fabella syndrome is characterized by sharp pain, local tenderness, and intensification of pain in the area of the fabella by full extension of the knee.

Mangieri³ described a peroneal nerve injury resulting from a fabella and he cited that Yamahiro,⁴ in 1967, was the first to describe peroneal nerve palsy caused by a fabella. Ten other cases have since been reported in the Japanese literature by four authors.⁵⁻⁸ Accordingly, we conclude that a fabella should be considered as one of the possible causes of peroneal nerve palsy, especially following a long-lasting operation with the patient in the supine position. Consistent with our case, Stack *et al.*⁹ reported on nine cases of compression of the common peroneal nerve by ganglion cysts of the knees, with symptoms of pain and common peroneal nerve palsy. Therefore, whenever a patient complains of pain, palsy, or sensory changes in the distribution of the common peroneal nerve, and whenever a mass is found posterolateral to the head of the fibula or posterior femoral condyle, the presence of a fabella must be considered.

In summary, we have described a case of peroneal nerve palsy due to a fabella in association with unphysiologic



FIG. 1. Lateral roentgenogram of the right knee showing the fabella.

position of the knees without placing knee supports beneath the knees for an operation of long duration.

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