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To the Editors:

Nerve tube in peripheral nerve repair

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Primary nerve repair is the preferred method after a nerve transection. Properly timed repair using microsurgical techniques give good results. Conventional nerve graft is an autologous nerve graft. An autologous sensory nerve is usually used as there are few expendable motor nerves. Nerve graft is oriented in reverse fashion and multiple cables are used depending on the circumference of the injured nerve. Sural nerve is the commonly used autologous nerve graft. Sural nerve harvesting is always associated with donor site morbidity. Nerve transfers, end to side nerve repair, vascular grafts and muscle flaps are also used with variable outcome [1].

Nerve tube is an alternative. This is a biodegradable transparent tube which comes in different diameters. Technique of nerve repair is simple (Figure 1). After preparing the severed nerve ends, those are fed into a proper-sized nerve tube with fine non-absorbable sutures [2].

Figure 1. Tubular nerve graft

Compared to the conventional method nerve tube has no donor site morbidity and requires less operating time due to the simplicity of technique. Disadvantages are the cost of the nerve tube and inability to use for nerve gaps of more than 30 mm [3].

A 22-year old navy soldier presented with loss of sensation over radial aspect of his left index finger. This was after laceration over the radial side of his left palm 8 months ago. On examination he had a healed scar with positive Tinel's sign over it. A damaged digital nerve was suspected.

Exploration was done under general anaesthesia in a bloodless field. A 20 mm gap was found following preparation of nerve edges. Coaptation was done with a 100% synthetic (lactide-caprolactone polymeric material) nerve tube of 2 mm diameter and 30 mm in length. Edges were sutured with 7/0 polypropylene and skin approximated with 5/0 polypropylene. Patient was assessed regularly using progressive Tinel's sign, two point discrimination and monofilament sensory test.

Nerve tube is a good alternative to avoid donor site morbidity in peripheral nerve repair of short distance (< 30mm). As the cost of the nerve tube is high, it is not a gain without a loss [4].

References

To the Editors:

Optochin-resistant *Streptococcus pneumoniae*

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*Streptococcus pneumoniae* (pneumococcus) remains a major cause of mortality and morbidity at the extremes of age. With increasing antibiotic resistance, its accurate early identification is important for initial management [1]. Its identification in clinical laboratories relies on colony morphology, α-haemolysis on blood agar, and optochin susceptibility. The bile solubility test, although simple, is not widely used [1]. Other methods used include molecular assays and species-specific capsular antigen detection.

Ethylhydrocupreine hydrochloride (optochin) is a quinine derivative used to differentiate pneumococci from viridans streptococci [1]. Frozen storage of pneumococci in glycerol may affect the optochin phenotype [2]. The optochin susceptibility is performed on blood agar by disk diffusion using commercially available discs [3]. There are 2 optochin-resistant phenotypes: uniformly optochin-resistant (homogenous) type and the (heterogeneous) type with the presence of a subpopulation within the inhibition zone [1].

Optochin resistance in pneumococci was first reported from Finland in 1987, and has since been reported widely [1]. We report such a case isolated from Sri Lanka, to alert clinicians and clinical microbiologists to the existence of these strains locally.

A 4-year old boy was admitted to the Teaching Hospital, Kandy with acute meningitis. Blood was obtained for culture and the patient was given intravenous cefotaxime. After 24-hour incubation, α-haemolytic colonies grew on blood agar and chocolate agar, with no growth on MacConkey agar. The gram stain of the culture revealed gram-positive diplococci. The optochin test which was repeated with several discs did not show a zone of inhibition around the disc. The isolate was confirmed as *Streptococcus pneumoniae* by species-specific capsular antigen detection. It belonged to the homogeneous resistance type, and the strain was susceptible to antibiotics, including penicillin (minimum inhibitory concentration: 0.06 μg/ml by E-test).

We believe that clinical laboratories using the optochin test as the only method to differentiate viridans streptococci from pneumococci should use an additional method, such as the bile solubility test or the species-specific capsular antigen detection test, to identify the isolate as pneumococcus. Accurate identification is important because of the existence of multi-drug resistant *Streptococcus pneumoniae* locally [5].

References


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