

A decorative rectangular border composed of a repeating floral or leaf-like pattern, framing the central text.

REVIEW OF LITERATURE

R E V I E W O F L I T E R A T U R E

Local anaesthesia had its beginning in 1884 when Koller showed that cocaine would anaesthetize the cornea. Halsted (1885) demonstrated that a cocaine solution would temporarily stop conduction when injected around the nerve trunk, procaine a relatively safe and satisfactory local anaesthetic agent was synthesized in 1904 by Finhorn. Lidocaine (Xylocaine) was synthesized in 1943 in Sweden by Lofgren and Lundqvist. Clinical trial began in 1944 at the Karolinska Hospital. This drug is from different chemical family than the procaine group and its pharmacological properties have been described by Goldberg (1947).

Gordh (1949) reported the use of lidocaine in 405 general medical and surgical cases. He found the safety coefficient to be four times as high as that of procaine. The drug was completely non-irritating and extremely stable to changes in pH or boiling. Lloyd and Elythe (1949) reported on the use of lidocaine in 900 dental administrations. They concluded that block anaesthesia was induced faster, more complete and was

longer acting with lidocaine than with procaine. It was estimated that 60% as much lidocaine as procaine was used in 900 administrations they had no major reaction and the only minor reaction was an episode of syncope.

Pitkin (1953) stated that lidocaine can be used safely in patients known to be sensitive to procaine. Bonica (1953) stated that in equal doses the toxicity of lidocaine is no greater than that of procaine, and that its anaesthetic index is two to four times that of procaine.

The earliest literature available for closed reduction by haematoma block is a work of Ramsey et al (1957). In this study one hundred sixty nine patients with fractures, dislocations and epiphyseal separations were treated by closed reduction and immobilization using lidocaine local infiltration anaesthesia. These studies were done during 18 months period from Sept., 1955 to Feb., 1957.

Another study was done by Dinley and Michelinakis (1972) in Orthopaedics department. South Mead Hospital Bristol. The 280 patients attended casualty

department between Feb., 1969 to June, 1971. According to them local infiltration anaesthesia using 10 ml 1% lignocaine for closed reduction of Colles' fracture was found to be very effective procedure and one that was well tolerated by patients. It is a procedure enabling cases to be treated without delay. It was also found to be completely safe with no adverse effects of either a localized or systemic nature in 280 patients and no case of infection was seen. No nausea or vomiting occurred and perhaps the most impressive feature of this form of anaesthesia was the immediate post operative well being of the patient and prolonged post operative relief of pain.

In 1985, a total of 310 patients were studied by Case in Birmingham Accident Hospital. Who had sustained a distal fracture of the forearm during Dec., 1981 to March, 1982. One hundred thirty six patients needed some form of anaesthesia for reducing their fractures e.g. general anaesthesia, regional anaesthesia (Bier's block), Haematoma block and under the influence of unspecified ethanol and then comparison of effectiveness by

different methods was assessed that how many required remanipulation. He used 5 ml 2% lignocaine.

Another study by Cobb of Accident Service, John Radcliffe Hospital, Oxford and Haughton of Nuffield Orthopaedic Centre, Oxford in 1985 over over local anaesthetic infiltration using 10 ml 2% lignocaine versus Bier's block for Colles' fractures was done according to them for patients with fresh Colles' fracture local anaesthetic infiltration was more popular among accident service staff, giving satisfactory anaesthesia being simpler and quicker to perform and avoiding risks of a large intravenous dose of local anaesthetic agent, reaching the general circulation.

A study done by Quinton (1988) in nine cases undergoing manipulation of Colles' fracture with varying doses of local anaesthetic agent into the fracture haematoma the potentially toxic concentrations of lignocaine were found in the arterial circulation reaching a maximum after manipulation of fracture. There were no objective or subjective signs of systemic

toxicity from the local anaesthetic agent. No later infections were reported.

Jhonson and Noffsinger (1991) reported no infection in the study of 132 patients.
