CONCLUSION
CONCLUSION

From our study using the supraclavicular technique of brachial plexus block with lignocaine hydrochloride solution having three different $p^H$ for surgery on the upper extremity, it was concluded that.

1. Raising the $p^H$ of 2% lignocaine hydrochloride with adrenaline solution from 3.21 to 6.21, produced a definite reduction in the latency of sensory as well as motor block.

2. Further increase in the $p^H$ of the 2% lignocaine hydrochloride with adrenaline solution to 6.67 did not confer any added advantage over the same local anaesthetic solution having $p^H$ 6.21 in the reduction of the latency of sensory and motor block.

3. As per the duration of the block is concerned alkalinization of the 2% lignocaine hydrochloride with adrenaline solution improved the duration of motor block with no effect on the duration of sensory block.

4. Much improvement in the duration of motor block was seen with the solution having $p^H$ 6.21 as compared to that having $p^H$ 6.67.

5. In our study recovery of sensory fibre preceded the recovery of motor fibres.

6. Greater frequency of complete block was seen on increasing the $p^H$ of 2% lignocaine hydrochloride to 6.21 from 3.21. No added advantage in the quality of block was seen on increasing the $p^H$ further to 6.67.
7. No incidence of failed block was observed in either of the groups.

Therefore alkalinized lignocaine hydrochloride solution provides significant advantage over non-alkalinized lignocaine hydrochloride in term of quicker onset, duration and quality of block. This appears to be due to a more rapid rate of intraneural diffusion, production of ion trapping and resultant increase in the amount of active cation available at intraneural receptor site.