

CASE REPORT

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Acute Anaphylaxis with Lignocaine

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INTRODUCTION

Over the years lignocaine has gained a widespread popularity in the different fields of medicine, not only as a local anaesthetic but also as a reliable anti-dysrhythmic drug, so apart from anaesthesiologists, it is being used by the physicians, cardiologists, surgeons, ophthalmologists, dentists, otolaryngologists and obstetricians quite commonly. As far as the adverse effects are concerned, over dose toxicity is quite familiar and taken into account by most of the physicians¹. Acute anaphylaxis is an uncommon complication and not very commonly seen by most of the anaesthesiologists². Here is an account of such a case observed and managed in Somalia.

Key Words: Anaphylaxis, Lignocaine.

CASE REPORT

A 50 years old Somali male was booked for cataract extraction under local anaesthesia. There was no systemic disease. The facial and orbital nerves were blocked with 20 ml of 1 percent plain lignocaine. Within five minutes of administration it was observed that the patient became semiconscious and could not breathe properly. When the anaesthesiologist reached the situation, the patient was listless, there was increased respiratory effort, and pulse oximeter read less than 80% saturation. Oxygen 100% was immediately started by mask. On further examination heart rate was rapid; BP was not recordable; there were inspiratory and expiratory rhonchi all over the chest and diffuse urticarial rash could be observed on arms and chest in spite of darkly pigmented skin. Patient's feet were raised about six inches on a pillow and one mg of diluted adrenaline was given intravenously in two minutes. Same dose was repeated after five minutes and 1000 ml Ringer's solution infused rapidly. Within a few minutes, patient's blood pressure improved to 90/60 mm Hg and he regained consciousness. Injection aminophylline 250 mg was given slowly. Oxygen saturation progressively improved

to normal limits. Within ten minutes the area of spread of skin rash increased and blood pressure again started falling, rhonchi persisted. Injection hydrocortisone 200mg I/V and adrenaline infusion (2 mg in 100 ml 5% dextrose) started at the rate of 15ml/hour (0.07 ug/kg/min). Surgery was postponed and the patient was further managed in the intensive treatment centre. There he was continuously monitored for heart rate, ECG, non-invasive BP and saturation of oxygen. He was kept on oxygen by mask, continued adrenaline infusion and was given injection hydrocortisone 100 mg six hourly. Patient was symptom free after about six hours. Rash subsided, BP stabilized and chest cleared. He was kept over night in ITC and discharged from the hospital the next morning.

DISCUSSION

Commonly reported adverse effect to local anaesthetics is over dose toxicity. Allergic reactions are rare despite the frequent use of these drugs. It is estimated that less than 1% of all adverse reactions to local anaesthetics are due to an allergic mechanism. All modern local anaesthetics belong to lignocaine (amide) group. The amino esters like cocaine, procaine and cinchocaine are no more used because of their toxicity and potential to produce allergic reactions. The ester group is para-aminobenzoic acid derivative, which is known to be allergenic. The amide local anaesthetics are not derivatives of para-aminobenzoic acid and allergic reactions to this group are extremely rare³. Although the amide local anaesthetics appear to be relatively free from allergic reactions, solutions of these agents may contain a preservative (methylparaben or similar substances), whose chemical structure is similar to para-aminobenzoic acid. As a result, an allergic reaction may reflect prior exposure and antibodies production by the preservative and not the local anaesthetic⁴.

Documentation of allergy to a local anaesthetic is based on the clinical history and perhaps use of intradermal testing^{5,6}. The occurrence of rash, urticaria and

laryngeal oedema, with or without hypotension and bronchospasm, is highly suggestive of local anaesthetic evoked allergic reactions and it happened in our case. Conversely, hypotension associated with syncope or tachycardia when local anaesthetic solution is used, is more suggestive of over dose or inadvertent intravenous injection of the drug⁴.

Although amide local anaesthetics, especially lignocaine, are being used so frequently and most of the times quite safely, still apart from the threat of overdose toxicity there is always a chance of life threatening anaphylactic reaction. So the administration should not be a casual procedure. It is suggested that no local anaesthetic be administered without a prior I/V access. Only a person familiar with its toxicity, and fully capable to treat any untoward side-effects or toxic reactions must administer it. In normal practice, its use must be limited to a vicinity with full facilities of resuscitation as well as administration of general anaesthesia. The ability to give oxygen by mask, I/V fluids and injections like adrenaline, hydrocortisone and aminophylline must be kept in mind. Patient's heart rate, blood pressure and oxygen saturation should be monitored. In the developed countries, it is called 'monitored care anaesthe-

sia'. If nothing more, at least it should be kept in mind that severe anaphylactic shock is a possibility, though it is very rare.

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Practice Guidelines for Pulmonary Artery Catheter Use (ASA Task Force on Pulmonary Artery Catheterization)

OPINION:

- * PAC can reduce the incidence of perioperative complications by providing access to critical haemodynamic Data.
- * Experience and understanding are major determinants of PAC effectiveness.
- * Helpful in situations where immediate and precise decisions about fluid management and drug treatment is required
- * Should be used in cases where anticipated benefits outweigh the potential risks.

RECOMMENDATIONS:

- * Use of PAC should be considered in surgical settings associated with an increased risk from haemodynamic changes.
- * Due to the risk of complications associated with the use of PAC procedures should not be performed by clinicians who lack competence in safe insertion or in accurate interpretation of results.