



OB PATIENT WITH ANAPHYLAXIS TO AMIDE LOCAL ANESTHETIC PRESENTING FOR A C-SECTION

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Case Report

A 30-year-old G1P0 presented at 39 weeks for a C-section. The fetus was in a breech position, and the patient was refusing a version. The patient stated she had an anaphylactic reaction to Lidocaine at the dentist a few years back. She said she followed up with an allergist who confirmed her allergy to Lidocaine by skin test, per report, no other local anesthetics LA were tested. The patient was offered a general anesthetic, but she preferred a regional and wanted to know her options. The decision was made to offer her an epidural with 2-chloroprocaine. To rule out a potential allergy, we decided to do a skin test with the LA. The potential side effects of an epidural with 2-chloroprocaine were reviewed and we explained that a pre-procedure skin test would be warranted. Consent was obtained. We injected 0.5 cc of 2-chloroprocaine subcutaneously in her forearm. After 20 minutes, no reaction was noted, and we felt comfortable proceeding. The decision was made to do an epidural versus a single shot spinal due to the short duration of the 2-chloroprocaine. The usual duration of a chloroprocaine spinal is 20 to 30 minutes. A combined spinal epidural was considered but we wanted to make sure the epidural was working before proceeding. 3cc of 2-chloroprocaine were injected at the L3-L4 lumbar skin area. An epidural needle was then placed, advancing until loss of resistance, the catheter was threaded and the needle was removed. 12 cc of preservative-free 2-chloroprocaine was injected through the catheter. The patient had no sensation, per skin prick, up to T4. The patient was comfortable. The baby was delivered and had Apgar scores of 8 and 9. At 30 minutes the patient started complaining of some discomfort, 3 more cc of 2-chloroprocaine were injected in the epidural catheter and the case ended without issues. On follow up the patient had no side effects and was happy with her care.

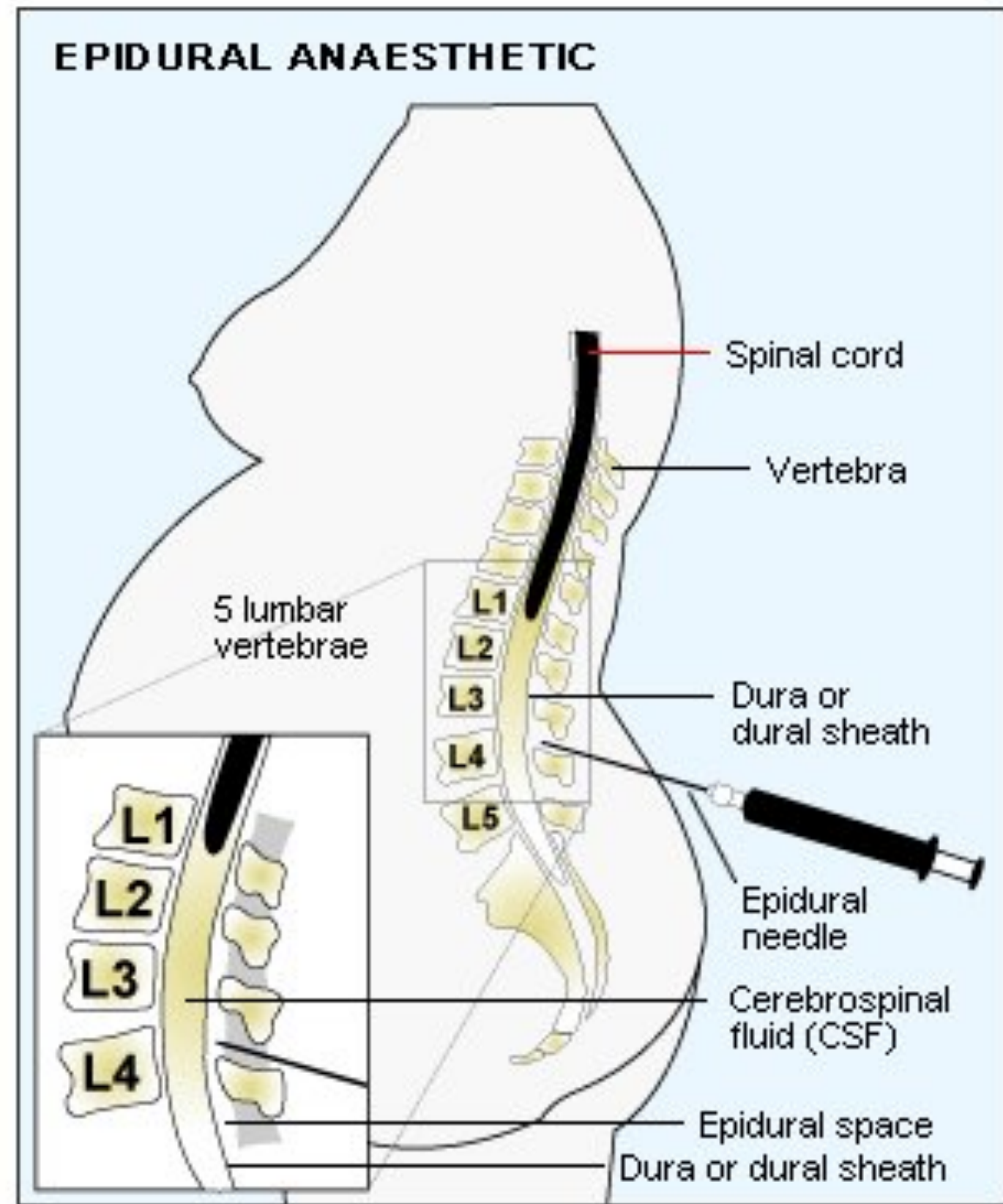
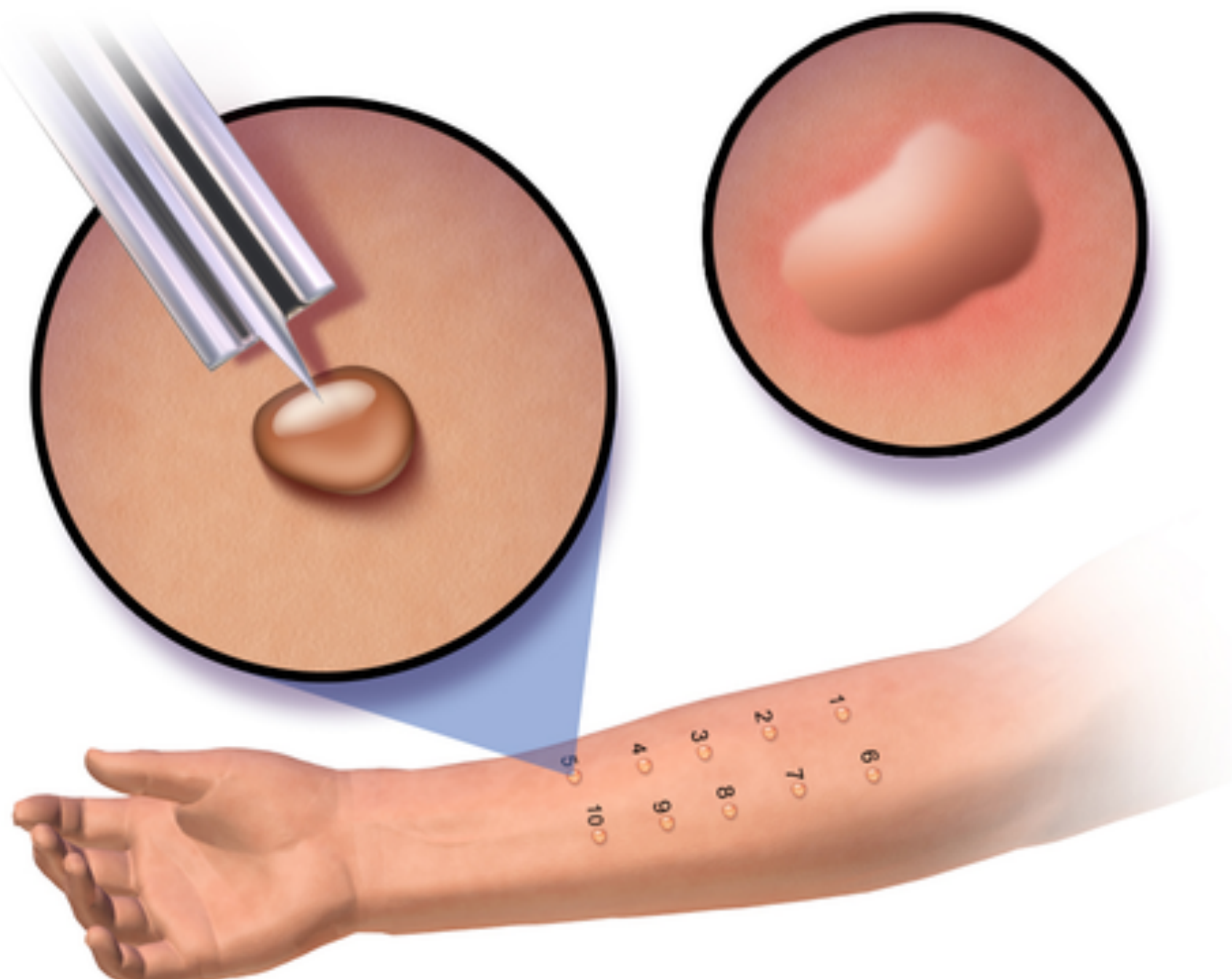


Figure 1: Epidural Anesthesia (6)

Figure 2: Skin Allergy Testing (7)



Discussion

Anaphylactic reactions to amide local anesthetics are rare but have been reported. The most common allergic reaction to local anesthetic is contact dermatitis. Cross-reactivity has not been well identified in IgE-mediated responses but is often found in patch testing amongst different amides (1). When diagnosing a local anesthetic reaction, it is important to rule out an allergy to certain preservatives (including parabens and sulfates), reaction to latex (such as gloves or other instruments), or adverse reaction to included epinephrine (1). In a UK study of 2978 patients with suspected local anesthetic allergy, only 29 (0.97%) had a true IgE-mediated allergy (2). In patients with suspected or confirmed local anesthetic reactions it is important to consider an anesthetic of a different class (i.e. if the reaction was to an ester consider an amide). However, because cross-reactivity is not well established in anaphylactic local anesthetic reactions, a clinician can consider giving a drug in the same class (1). Provocative grading challenges are recommended whenever there is a suspected allergy, even if the clinical suspicion of true local anesthetic allergy is low (1). This involves skin testing with an increasing dose of the local anesthetic of interest. Almost all patients with a history of local anesthetic hypersensitivity will be able to tolerate at least one local anesthetic (1). The recommendation in patients with local anesthetic hypersensitivity is to use preparations, for testing and for clinical use, without epinephrine, and ideally without preservatives.

Chloroprocaine is not commonly used for first-line epidural blocks due to the risk of neurological deficits after inadvertent intrathecal injection of the drug and severe back pain post-usage (3). An Observation study of patients undergoing lower limb surgeries with a Chloroprocaine spinal showed 46 patients with varying doses of Chloroprocaine had no neurological side effects and tolerated the procedure well (4). In a study of over 4,000 patients only 5 cases of transient neurologic symptoms were identified, a lower risk than found with lidocaine (3). While there is still some risk of neurological deficits post-chloroprocaine administration, these side effects are usually transient and have not been demonstrated to be significant at appropriate doses. Back pain post usage of Chloroprocaine has been well established. Most concerning is the incidence of deep, aching, burning, and poorly localized pain in the lumbar region. While the pain is associated with Chloroprocaine at high doses (especially over 40ml), using 25 ml or less has an incidence similar to lidocaine (5).

Conclusion

Regional anesthesia, with an epidural or spinal, is considered the safest anesthetic for a C-section. The usual local anesthetic injected is an amide LA, bolusing 2% lidocaine in an epidural or injecting 0.75% bupivacaine through a spinal, both preservative-free.

There are case reports of pregnant patients with allergic reactions to amide LA that are ruled out for an allergy to ester LA by an allergist before they present for delivery. It is unlikely for a patient to have an allergy to both ester and amide LA but that should be ruled out before proceeding. We present a case of a patient who presented with a known anaphylaxis to an amide LA without testing for an allergy to other LA, amide or esters, and we were able to proceed with doing a skin test on labor and delivery.

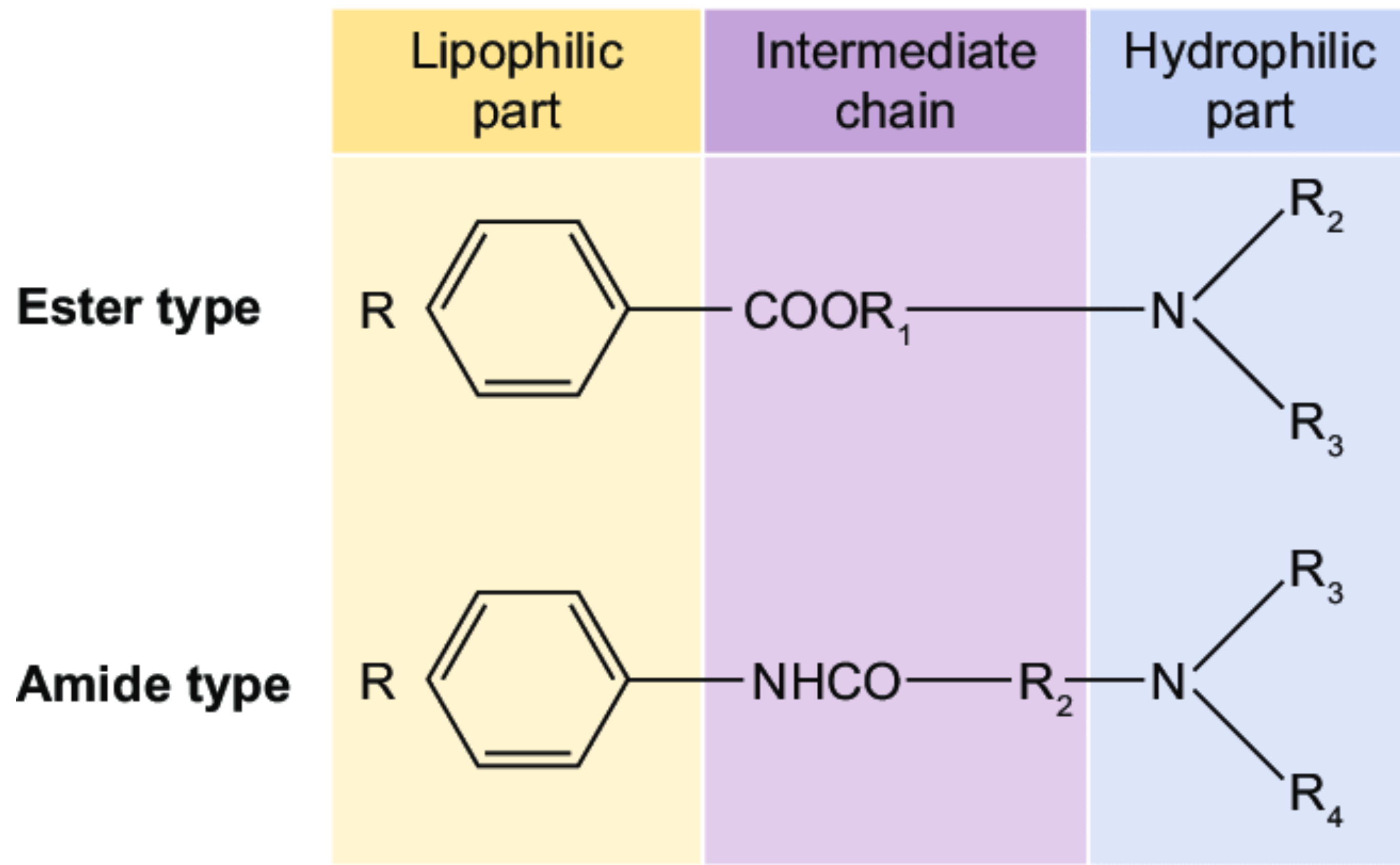


Figure 3: Amide vs Ester Local Anesthetics (8)

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