

- 8) Preservative in LA solution is
 - a) Sodium metabisulfide
 - b) Methyl paraben
 - c) Thymol.
 - d) Saline
- 9) Concentration of Lignocaine used for injections during dental extractions.
 - a) 2% b) 5% c) 10%
- 10) Concentration of Lignocaine used for topical application (Gel form)
 - a) 2%. b) 5%. c) 10%
- 11) Systemic complications of Local anaesthetics
 - a) Anaphylaxis.
 - b) Infection
 - c) Nerve injuries.
 - d) all of the above
- 12) Maximum dosage of lignocaine with adrenaline is
 - a) 4.4 mg/kg body weight.
 - b) 7 mg/kg body weight.
 - c) 10 mg/kg body weight
- 13) Hypersensitivity reactions are more common in
 - a) Ester group LA.
 - b) Amide group LA.
 - c) None of the above
- 14) Do you test for LA allergy before each injection in the patient?
 - a) Yes. b) Not at all. c) Sometimes if necessary
- 15) To obtain a nerve block LA agent should be injected
 - a) into the nerve.
 - b) close to the nerve.
 - c) randomly into tissues
- 16) Aspiration before giving LA agent is recommended to avoid
 - a) Anaphylaxis. b) Systemic toxicity. c) Syncope

RESULT:

Option	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1	24	11	18	17	11	18	14	14	26	4	13	17	15	3	6	14
2	7	9	8	10	10	13	11	16	5	19	6	12	11	20	23	11
3	0	8	2	3	5	0	3	1	0	8	7	2	5	8	2	6
4	0	3	3	1	5	0	3	0	0	0	5	0	0	0	0	0

Table 1: shows maximum number of 3rd year students choosing various options.

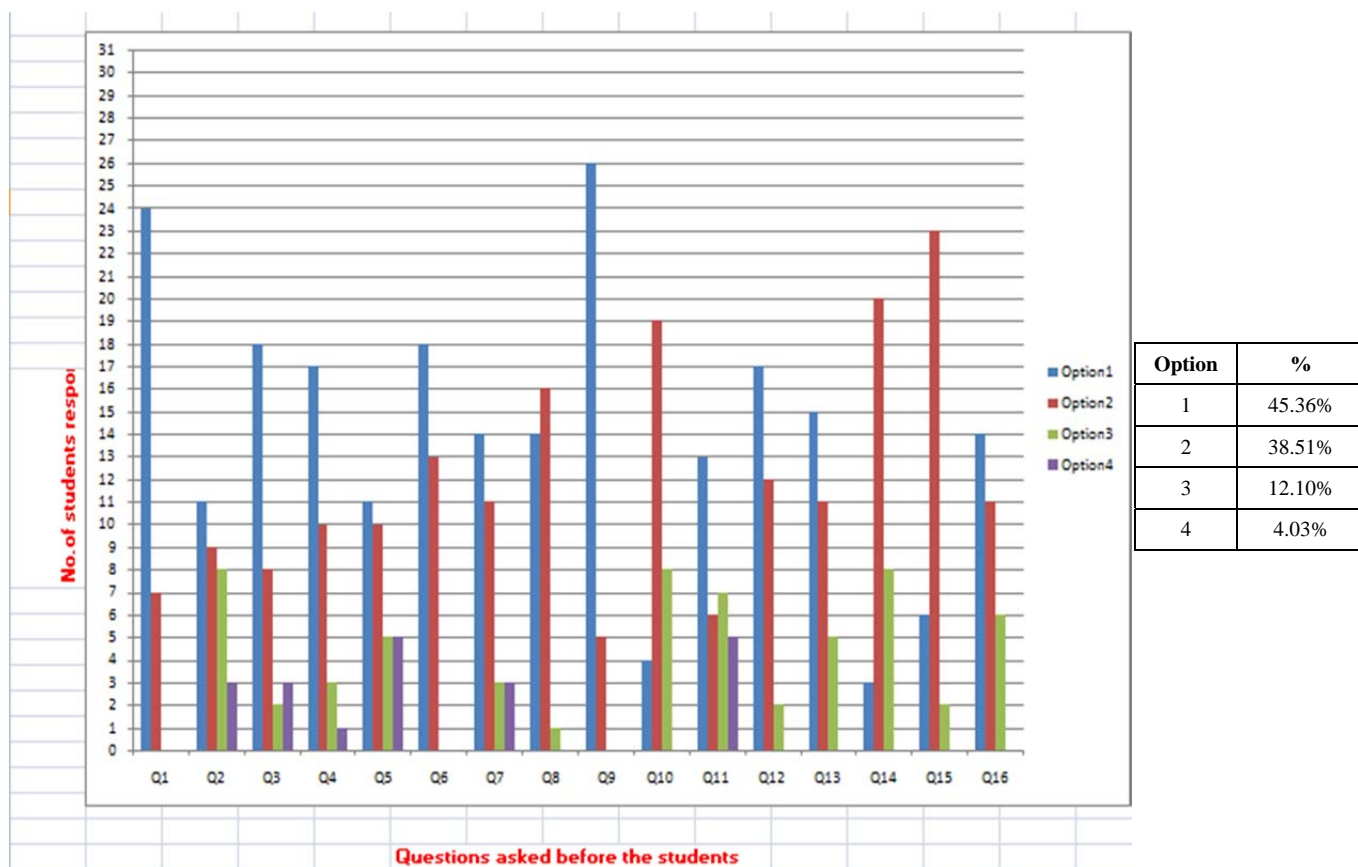


Table 2: Bar chart representing the maximum option chosen by 3rd year students

Option	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1	20	8	18	14	3	13	13	9	18	8	8	16	12	11	4	7
2	3	7	6	7	9	11	11	20	5	20	7	11	12	9	24	17
3	7	11	4	9	7	6	3	1	7	2	7	3	6	10	2	6
4	0	4	2	0	11	0	3	0	0	0	8	0	0	0	0	0

Table 3: shows maximum number of 4th year students choosing various options.

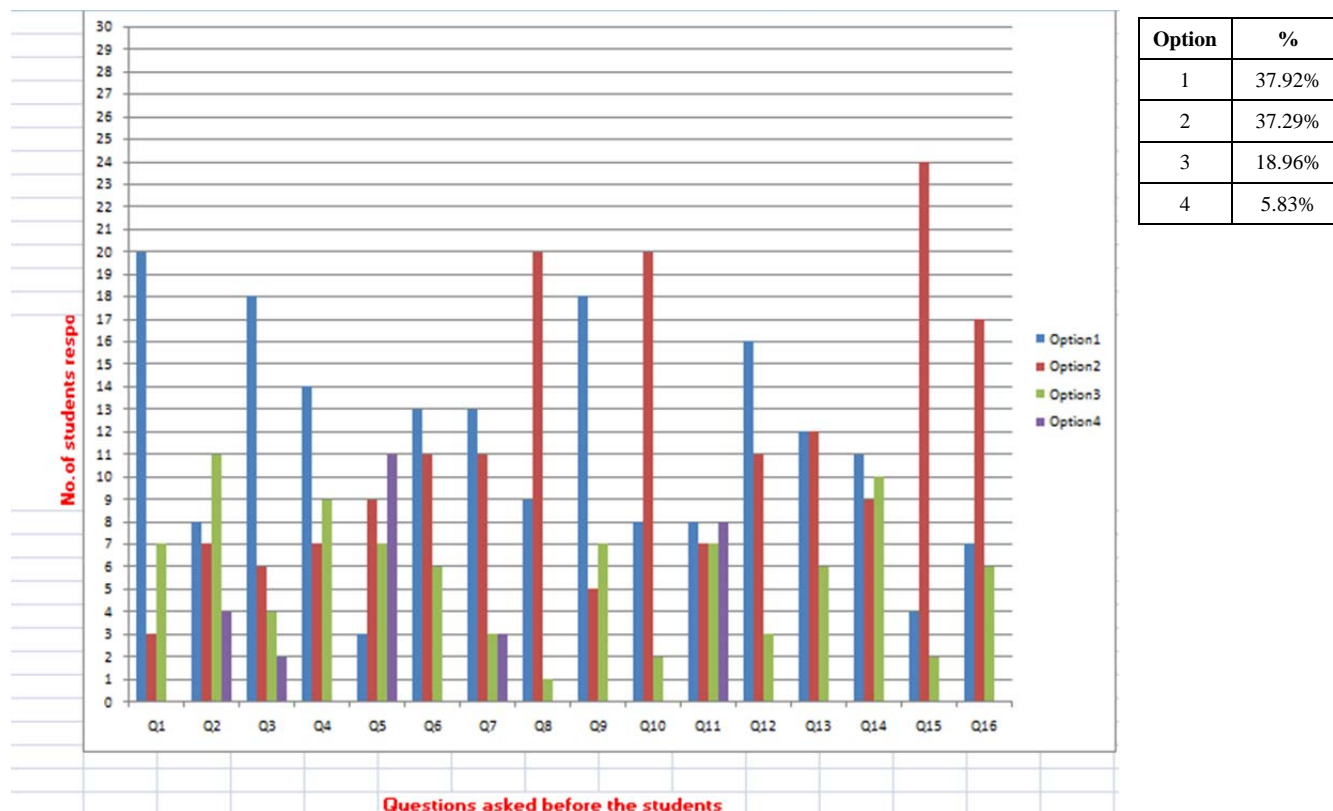


Table 4: Bar chart representing the maximum option chosen by 4th year students

- 45.36% and 37.92% of 3rd year and 4th year undergraduates commonly use lignocaine during oral surgical procedures.
- 11 out of 31 3rd year and 8 out of 30 4th year dental students choose Articaine as a most commonly used local anaesthetic in western countries.
- 18 out of 31 3rd year and 18 out of 30 4th year choose Bupivacaine for long lasting effect of anaesthetic.
- 17 out of 31 3rd year and 14 out of 30 4th year correctly choose Lignocaine as short acting local anaesthetic.
- 5 out of 31 3rd year and 11 out of 30 4th year choose lignocaine for its ease of availability, cheaper and safest drug.
- 18 out of 31 3rd year and 13 out of 30 4th year mentioned lignocaine's onset of action as 1-3 mins.
- 14 out of 31 3rd year and 13 out of 30 4th year use Diphenhydramine as an alternative drug for lignocaine.
- 16 out of 31 3rd year and 14 out of 30 4th year choose correctly chose the preservative of LA as methyl paraben.
- 26 out of 31 3rd year and 18 out of 30 4th year use 2% concentration of lignocaine during oral surgical procedures.
- 19 out of 31 3rd year and 20 out of 30 4th year use 5% lignocaine (gel form) as a topical anaesthetic.
- 5 out of 31 3rd year and 8 out of 30 4th year says that anaphylaxis, syncope and nerve injuries are the systemic complications of LA.
- 12 out of 31 3rd year and 11 out of 30 4th year use 7mg/kg bodyweight of lignocaine with adrenaline.
- 13 out of 31 3rd year and 15 out of 30 4th year clearly mentioned that ester group of LA shows hypersensitivity reaction than amide group.
- 20 out of 31 3rd year and 9 out of 30 4th year do not test for LA allergy before giving injection to the patient. It is mandatory to check for LA allergy to minimize the risk of hypersensitivity reactions.

- 23 out of 31 3rd year and 24 out of 30 4th year inject LA close to the nerve fibres. If it is injected into the nerve, may cause nerve injuries or randomly into the surrounding tissues may cause rapid absorption of LA.
- 11 out of 31 3rd year and 17 out of 30 4th year recommend aspiration before injecting LA, to prevent systemic toxicity.

DISCUSSION:

An accidental intravascular injection of local anaesthetics may occur following any injection procedures.

- A number of complications can arise from the incorrect administration of local anaesthetic injections, some of which are permanent and can damage patients or even be life threatening (2)(3)(4)(5)(6).
- Some authors recommend performing at least two negative aspirations before depositing local anaesthetics. The high levels of toxicity can be achieved by the accidental intravascular injection of local anaesthetics (7) (8).
- Syncope may be related to the fear of the dental injection and anxiety related events. Failure of local anaesthetics to be effective is related to many factors such as, inaccurate anatomical deposition of the local anaesthetic solution or the use of inadequate amounts of solution. The determination of local anaesthetist dosage remains a problem for most of the dentists sampled here. The inability to understand and manipulate such important issues in dentistry is of considerable concern as it is likely to render dentists as unsafe health providers.
- Evaluating the result of the study conducted indicate a relatively low level of knowledge, attitude, and practice regarding local anaesthetics among dental students.

CONCLUSION:

In conclusion, the knowledge of undergraduate students concerning the local anaesthetics maximum-dose and dose calculations appears inadequate and worrying, especially since systemic toxicity of local anaesthetics is dose dependent. It is recommended that undergraduates should update regarding the correct and current application of these critically important aspects in dentistry for providing better treatment without any complications.

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