Evaluating The Visual Analogue Scale (Vas) In Patients Undergoing Extraction

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ABSTRACT

Pain is the most common associated factor with any injury. It can be acute or chronic based on the nature and also depends on the type of pain experienced. It depended on the individual's threshold and perception and varies according to each individual. This study was done to evaluate Visual Analogue Scale in patients undergoing extraction. A cross-sectional study was performed on 320 dental patients undergoing extraction where each patient was asked to grade present pain on visual analogue scale (VAS) providing an evaluation of pain intensity at the moment of interview of patient. Visual analogue Scale provides a useful and simple method for describing pain experience, it does not assess the multidimensional nature of pain. Pain can also be experienced due to improper treatment, thus influencing the quality of treatment directly. Hence it is essential for assessment of pain before and after dental procedures.

KEYWORDS: Pain, Visual Analogue Scale.

INTRODUCTION

Pain has been defined by Mersky et al as "an unpleasant sensory and emotional experience with actual or potential tissue damage or described in terms of such damage"[1]. Perception of pain is subjective and the threshold varies for each person. It is also influenced by previous experiences [2,3]. Pain can be measured by self-report, biological markers, and behaviour [4]. Various techniques have been developed for assessing different types and subtypes of chronic pain conditions so that the effect of pain on quality of life and the patient's function can be evaluated [3]. The various techniques include McGill Pain Questionnaire (MPQ),Short form of the McGill Pain Questionnaire (SF-MPQ),Wisconsin Brief Pain Questionnaire (BPQ) and One-dimensional scales like Visual Analogue Scales (VAS),Heft-Parker visual analogue scale (HPS), Verbal rating scale (VRS) , Numerical rating Scale (NRS), Faces Pain Scale (FPS),Wong-Baker Faces Pain Rating Scale (WBS) and Full Cup Test (FCT). Multidimensional pain scales assess the location / severity, chronicity, quality, contributing / distribution aetiology of pain, mechanism of injury and in some cases barriers to pain assessment. Thus evaluation of pain must be done since it can influence the quality of treatment directly [5,6]. This study was done to evaluate Visual Analogue Scale in patients undergoing extraction.

MATERIALS AND METHODS

A cross-sectional study was performed on 320 dental patients undergoing extraction in a private dental clinic in Chennai, India.

Inclusion Criteria:

- Patients aged 18 to 65 years of Chennai were included in the study for perception of pain after obtaining informed consent.

Exclusion Criteria:

- Non-residents of Chennai
- Physically disabled patients
- Medically compromised patients

Patients were divided into three groups on the basis of age:

- Group I—18 to 33 years
- Group II—34 to 49 years
- Group III—50 to 65 years

Each group was further subdivided into two based on gender.

Data collection was one during a year's (January 2020- January 2021) study while patients were sitting on dental chair after extraction. Each patient was asked to grade present pain on visual analogue scale (VAS) providing an evaluation of pain intensity at the moment of interview of patient. The visual analogue scale (VAS) is a line approximately 10 mm in length with each end anchored by extreme descriptive (e.g., no pain versus worst pain imaginable) Patients were asked to make a mark on the line that represented their level of perceived pain intensity. Mean visual analogue scale (VAS) according to age groups (I, II, III) were assessed.

RESULTS

Mean visual analogue scale (VAS) according to age(Table 1) in Group I in both males and females is 0.65 and 2.15(Figure 1), respectively. In Group II mean visual score is 1.8, for both males and 3.27 females (Figure 2) In Group III mean visual score is 1.5 for males and 0.63 for females (Figure 3). Mean visual analogue score according to tooth mobility is 3.9 in patients with tooth mobility and 7.1 in the absence of tooth mobility (Table 2). The mean visual analogue score according to the arch in which the tooth is to be extracted is 5.4 in upper arch and 5.6 in the lower arch(Table 3).

TABLE 1 MEAN VISUAL ANALOGUE SCORE ACCORDING TO AGE

Group I	Group II	Group II I

	18-33 years		34 to 49 years		50 to 65 years	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
	0.65	2.15	1.8	3.27	1.5	0.63

TABLE 2 MEAN VISUAL ANALOGUE SCORE ACCORDING TO TOOTH MOBILITY

TOOTH MOBILITY PRESENT	TOOTH MOBILITY ABSENT
3.9	7.1

TABLE 3 MEAN VISUAL ANALOGUE SCORE ACCORDING TO THE ARCH IN WHICH THE TOOTH IS TO BE EXTRACTED

UPPER ARCH	LOWER ARCH
5.4	5.6

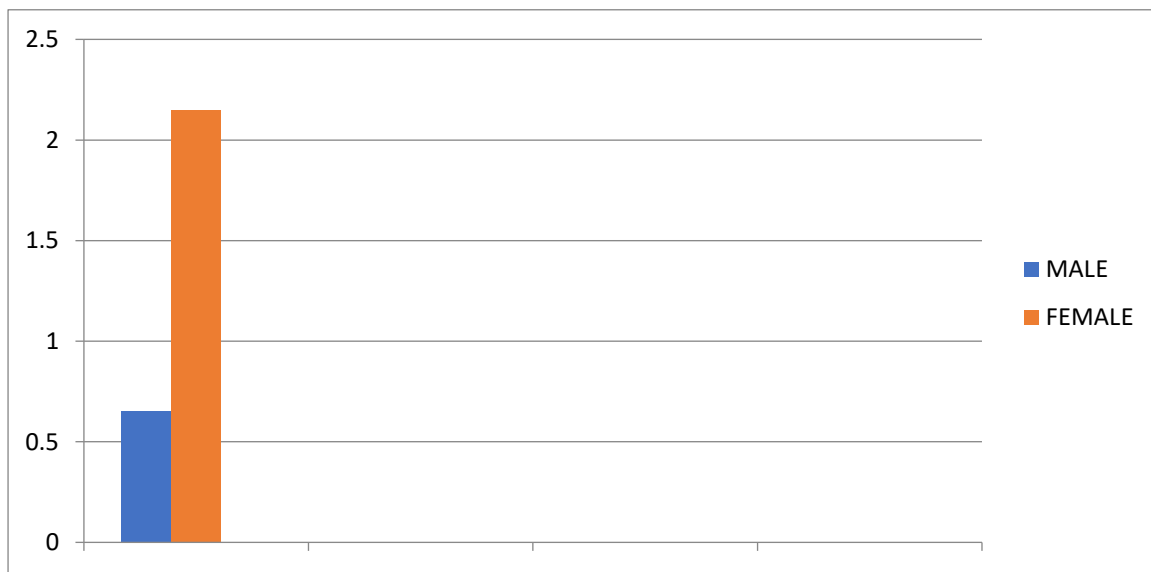**FIGURE 1 MEAN VISUAL ANALOGUE SCORE ACCORDING TO AGE: Group I**

FIGURE 2 MEAN VISUAL ANALOGUE SCORE ACCORDING TO AGE: Group II
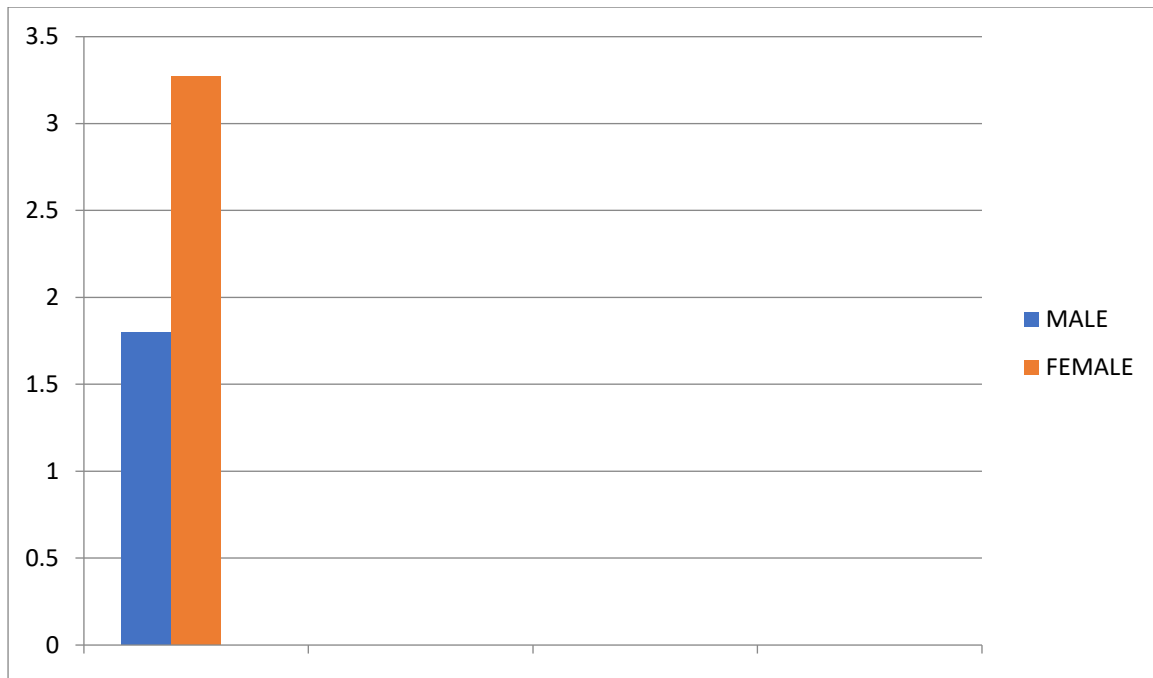
FIGURE 3 MEAN VISUAL ANALOGUE SCORE ACCORDING TO AGE: Group III

DISCUSSION

Pain recording during dental procedures especially during extraction is extremely important. An essential part of handling and treating dental patients revolves around managing their fear, anxiety, and pain; hence recording of the same creates an important document. In the lower range age group, the mean visual analogue scale was higher in females compared to males. This is also paralleled in the middle range age group where females experienced more pain compared to males. However in the higher range age group there was not much difference among both the

gender. Mean visual analogue score according to tooth mobility showed a higher pain index in patients whose tooth was non mobile compared to patients who experienced tooth mobility. The mean visual analogue score according to the arch in which the tooth is to be extracted showed almost equal values in the upper and lower arch. Although Visual analogue Scale provides a useful and simple method for describing pain experience, it does not assess the multidimensional nature of pain. The main limitation of the study is that, only one pain scale index was done. The pain experienced is subjective, so two or more scales for pain should be done. Also, this study did not include paediatric population and the sample for the study was collected from respondents in Chennai only.

CONCLUSION

Pain reporting should become a part of daily history taking before extractions in patients. Apart from the procedure itself, pain can result from insufficient and improper administration of local anaesthesia. Several pain assessment indexes can be used for evaluation .Since pain is a direct indicator of function and treatment quality, pain assessment evaluation should be done before and after ever dental procedure.

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