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A Survey of Current Preferences of Plastic Surgeons Regarding the Assessment and Reduction of Preoperative Patient Anxiety

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Abstract

Background—Preoperative anxiety is a common phenomenon in plastic surgery that has been associated with numerous negative patient outcomes. Little is known about the preferences of plastic surgeons regarding management of patient preoperative anxiety

Objective—To determine the preferences of plastic surgeons regarding the assessment and reduction of adult preoperative patient anxiety in their primary practice setting.

Methods—The membership of the American Council of Academic Plastic Surgeons (ACAPS) was surveyed using an anonymous, online questionnaire from April to June of 2020.

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Compliance with Ethical Standards

Conflicts of interest Dr. Rana Movahedi has the following disclosures outside of the submitted work: member of the speaker bureau of Merck & Co., Inc. Dr. Jeffrey Wang has the following disclosures outside of the submitted work: royalties from Biomet, Seaspine, Amedica, DePuy Synthes; investments/options in Fziomed, Promethean, Paradigm Spine, Nevenue, Nexgen, Vertiflex, Electrocore, Surgitech, Expanding Orthopedics, Osprey, Bone Biologics, Pearldiver; Board of Directors: North American Spine Society, North American Spine Foundation, AO Foundation, Cervical Spine Research Society; fellowship funding (paid to the institution) from AO Foundation. There are no other financial relationships, activities, or conflicts of interest.

Informed Consent This study was approved by our Institutional Review Board. For this type of study informed consent is not required.

Results—A total of 100 participants from a membership of 532 responded (19%). The majority of respondents (63%) did not formally assess patient anxiety but supported the use of standardized scales to measure anxiety (57%). Most plastic surgeons preferred patient education (81%), family member presence (69%), and visit from the anesthesiologist (54%) to reduce patient anxiety. Plastic surgeons also allocated the most responsibility to anesthesiologists (63%) and plastic surgeons (62%) to reduce preoperative anxiety.

Discussion—Most plastic surgeon members of ACAPS did not assess their patients' anxieties preoperatively but appeared willing to use anxiety scales. Plastic surgeons also supported several measures to reduce anxiety, especially patient education, family member preferences, and anesthesiologist visits. Although plastic surgeons appeared to hold multiple parties responsible to manage preoperative anxiety, they held themselves and anesthesiologists most responsible. Future studies are needed to determine whether these views cohere with those of other healthcare providers and whether these preferences change for pediatric patients.

Level of Evidence V—This journal requires that authors assign a level of evidence to each article. For a full description of these evidence-based medicine ratings, please refer to the Table of Contents or the online Instructions to Authors www.springer.com/00266.

Although a high prevalence of psychiatric disorders exists in the patient population that undergoes cosmetic plastic surgery, preoperative anxiety is a ubiquitous and potentially discrete phenomenon experienced by patients scheduled to undergo plastic surgery for a multitude of reasons including trauma, cosmetic reasons, and other circumstances [1]. While psychiatric disorders have been extensively studied in the specialty, few studies of preoperative anxiety exist despite its well-documented association with negative outcomes such as hemodynamic instability and poor patient satisfaction [2, 3]. Moreover, preoperative anxiety appears to be nuanced and potentially conflated with psychopathologies such as generalized anxiety disorders.

Risk factors for self-reported preoperative anxiety include younger age and female sex [4]. Also, patients scheduled for cosmetic surgery experience significantly more preoperative anxiety, on average, when compared to patients that underwent reconstructive surgery [5]. Moreover, the use of technical jargon by staff appears to increase stress while casual conversation appears to have an alleviating effect [4]. Given the relative dearth of literature regarding the assessment and reduction of preoperative anxiety in adult plastic surgery patients, we performed a cross-sectional study of academic plastic surgeons to obtain their views regarding the subject.

After obtaining Institutional Review Board approval, we surveyed the American Council of Academic Plastic Surgeons (ACAPS). A total of three e-mails were sent to 532 members from April to June of 2020. The survey was completed by 100 members, constituting a 18.8% response rate. Most respondents were faculty surgeons (72%) followed by residents (26%) and fellows (2%). The majority of participants were in academic practice (77%) though a further 7% were in hybrid academic-private practice and the remaining were in private practice, hospital employment, and government or other employment (16%).

Our survey revealed that academic plastic surgeons predominantly did not discuss preoperative anxiety with their patients (63%). However, those that did not assess anxiety (n=59) mostly endorsed discussing anxiety if the topic was broached by the patient. Respondents that preferred to assess patient anxiety (37%) did so via verbal discussion (n=37) rather than scale or survey (n=1). A majority of plastic surgeons reported a willingness to use a rating scale to measure anxiety (57%). The three most popular methods to reduce anxiety preoperatively were patient education (81%), family member presence (69%), and visit from the anesthesiologist (54%). However, anxiety medication (32%), nurse-patient therapeutic interactions (32%), preoperative tours (24%), mental healthcare referral (20%), and traditional-complementary-alternative-medicine (16%) were also endorsed. Respondents also suggested other techniques such as personal reassurance (4%).

Although this study achieved a 18.8% response rate, the number of responses was consistent with previous studies of the ACAPS membership. We attempted to compensate for non-response bias by offering a lottery incentive and sending reminder emails. Furthermore, respondents in this study were primarily academic plastic surgeons and their views may differ from plastic surgeons working in private practice, hospital employment, or other practice settings.

Major responsibility for management of preoperative patient anxiety was allocated by plastic surgeons to anesthesiologists (63%) and plastic surgeons (62%). Patients (47%), nurses (40%), primary care physicians (25%), mental healthcare providers (21%), and family members (14%) were not given major responsibility but at least given some responsibility by a large percentage of respondents.

The findings of this survey offer insight into the preferences of academic plastic surgeons in the USA. Although the majority of responders did not assess preoperative anxiety in adult patients, most indicated a willingness to discuss anxiety and interest using scales or surveys for quantification. Most plastic surgeons also held themselves highly responsible to manage patient anxiety. An explanation of these apparently discordant views may be due to the perceived diffusion of responsibility between multiple care providers, the patient, and the patient's support system. For example, if the patient raised concerns about anxiety, plastic surgeons predominantly appeared to be willing to discuss it. Despite a strong interest in quantifying patient anxiety, only 1% of respondents employed a rating scale in their practice. This discrepancy may be explained by a lack of formal training in the use of rating scales or the lack of an existing scale that inspires confidence in plastic surgeons to accurately assess anxiety levels. Therefore, identifying valid and reliable scales, assessing awareness of scales among plastic surgeons, and developing efficient initiatives to train plastic surgeons in the use of anxiety scales may constitute avenues for future research.

With regards to the management of preoperative anxiety, plastic surgeons supported a wide variety of techniques. The endorsement of patient education, family member presence, and anesthesiologist involvement were in concordance with previous studies of neurosurgeons, orthopedic surgeons, and anesthesiologists [6, 7]. Other methods such as anxiety medication were also preferred by a large percentage of plastic surgeons. According to previous studies,

oral premedication with lorazepam or temazepam appeared to reduce anxiety, as did music therapy, scent of lavender, hypnosis, and virtual reality, among other techniques [8–12]. Although many strategies to reduce preoperative anxiety have been validated and confirmed in randomized controlled trials, additional research is needed to confirm these results in cosmetic and reconstructive plastic surgery. Future studies are also needed to determine which strategies are preferred in pediatric plastic surgery.

In this study, plastic surgeons appeared to hold themselves and anesthesiologists most responsible to manage patient anxiety. These findings were in agreement with previous studies of the views of anesthesiologists, neurosurgeons, and orthopedic surgeons [6, 13]. Given that plastic surgeons' views aligned with those of their colleagues in anesthesiology and other surgical specialties, it appears that surgeons and anesthesiologists allocate substantial responsibility to each other for the management of preoperative anxiety but also expect patients themselves, family members, and other healthcare providers to play an important role to reduce anxiety before surgery.

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