Patients find computer imaging before rhinoplasty moderately accurate, useful

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Computer imaging to predict how patients will look following plastic surgery involving the nose appears to be moderately accurate, and patients value its inclusion in the preoperative consultation, according to a report in the November/December issue of *Archives of Facial Plastic Surgery*, one of the JAMA/Archives journals.

Preoperative computer imaging is now widely used throughout facial plastic surgery, according to background information in the article. The technique may improve communication between surgeon and patient, help reconcile differences between a patient's desires and a surgeon's aesthetic, aid in preoperative analysis and planning and help identify patients with unrealistic expectations.

To assess the accuracy of the images in rhinoplasty, plastic surgery involving the nose, Umang Mehta, M.D., then of Lasky Clinic, Beverly Hills, and now of Atherton Plastic Surgery Center, Atherton, Calif., and colleagues studied 38 patients who underwent primary or revision rhinoplasty. Preoperative computer images and photographs taken six months after surgery were sent to two panels of judges-one composed of surgeons and the other of non-surgeons-who assessed the preoperative image accuracy on 12 parameters. In addition, patients were surveyed regarding their satisfaction with the outcome and the accuracy and usefulness of the computer images.

Overall, the expert panel rated the computer images with an average score of 3 on a scale of one to five, meaning they were moderately accurate. The least accurate parameter was the height of the supratip, or the area just above the tip of the nose, while the width of the nasal bones was rated most accurate. The non-surgeon panel gave the images an overall accuracy score of 3.55 and also rated the supratip height the least accurate parameter. However, they rated the straightness of the nasal pyramid the most accurate parameter.

Patient surveys were completed by 11 of the 38 participants. Of these, nine (81 percent) rated their overall happiness with the outcome at a four or five on a scale of one to five, and the accuracy of the computer images at 3.4. They perceived the imaging process to be helpful in understanding the surgeon's aesthetic, developing trust and understanding the surgery. Satisfied patients tended to have higher accuracy scores for their images.

"Patients found the preoperative computer imaging process to be extremely useful in several respects and stated that they would highly recommend the process to anyone undergoing the surgery," the authors write. "It is a reasonably accurate process, with supratip edema [swelling above the tip] being the primary limiting factor six months postoperatively. Projection seems to be the most challenging parameter to image accurately in the more difficult cases. Finally, there seems to be a correlation between accuracy of imaging and the patient's overall satisfaction level."

More information: Arch Facial Plast Surg. 2010;12[6]:394-398.

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