**Case Report:**

**Medico-Legal Evaluation of Keloid Formation Following Prominent Ear Correction: Malpractice or Complication?**

**Running Title:** Medico-Legal Evaluation of Keloid Formation

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**Abstract**

Prominent ears (=prominauris=) are anatomic auricular deformities that are seen in 5% of the population, are autosomal dominant in the white population, and have psychological problems and social isolation on youths. Numerous otoplasty procedures for the treatment of prominent ears have been discussed, and they typically involve cartilage preservation, cartilage cutting, or both. These surgical interventions can sometimes result in undesirable outcomes, such as hypertrophic scarring and keloid formation.

In the current case report, a 42-year-old woman filed a complaint claiming medical malpractice against the doctor and the hospital after extensive keloid formation occurred after prominent ear correction operation. The case was assessed from a medicolegal perspective. The court decided that the physician who was deemed responsible in the context of the artwork contract must pay compensation, despite the fact that the expert physicians agreed that the unfavorable result was a complication, contrary to the conventional legal decisions in Turkey.

Consequently, we think that establishing a patient-specific insurance system for cosmetic surgical interventions would not only recompense the patient’s harms but also reduce the number of unfounded malpractice claims against physicians.

*Keywords:* Keloid, Malpractice, Postoperative Complications, Cosmetic Reconstructive Surgery.

**1. Introduction**

Prominent ears (=prominauris=) are anatomic auricular deformities that are seen in 5% of the population, are autosomal dominant in the white population, and have psychological problems and social isolation on youths **[1-4]**. Numerous otoplasty procedures for the treatment of prominent ears have been discussed, and they typically involve cartilage preservation, cartilage cutting, or both. Sandra et al. reviewed 28 articles involving 3493 patients and described the following clinical problems following otoplasty procedures: Infection in 0.8% of patients, hematoma and/or bleeding in 2.5%, skin/wound healing problems in 3%, suture-related problems in 1.8%, scarring in 1.6%, pain and itching in 13%, and revision surgeries/recurrence in 5% **[2]**. It is reported that postauricular incisions are especially prone to hypertrophic scarring or keloid development **[5]**. Keloid disease is a benign, but locally aggressive and recurrent cutaneous fibroproliferative condition characterized by excessive hypertrophic keloid formation **[6]**.

Although the clinical aspects of prominent ear correction surgeries have been thoroughly reviewed in the literature, any article about the medico-legal aspects of this issue have not been reported. The aim of this article was to evaluate the medico-legal aspects of hypertrophic scar and keloid formation after a prominent ear correction surgery based on the current case.

**2. Case**

Eight years ago, a 42-year-old female patient underwent “prominent ear correction surgery” at a private hospital. Before the surgery, the patient’s coagulation functions were within normal limits. During the surgery, the bleeding vessels were cauterized in to achieve hemostasis. Care of the patient during the postoperative period in hospital and post-hospitalization follow-up examinations were carried out regularly. The incision was healing normally, except from some early mild pain and hypersensitivity, and the sutures were removed after seven days. The incision site was free of postoperative infection, however swelling arose around 45th day. Keloid developed after around 5 months. He was taken to a keloid correction surgery for this reason by the same surgeon. After the keloid was excised and removed during the surgery, the defect region was primarily sutured and repaired. After keloid surgery, intralesional triamcinolone injections were given once a month for a total of three times, but the keloid production grew much more.

The patient filed a lawsuit against the doctor and the private hospital, claiming that “the operating surgeon did not comply with the standards of care”, and asking for compensation. To evaluate whether the condition that had arisen was a complication or medical malpractice, the patient was referred by the court to our expert committee at 1.5 years after the first surgery, which was made up of plastic and reconstructive surgeons as well as forensic medicine experts. An excessive keloid formation was found in both auricles during the patient’s physical examination **(Figure-1).**

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**Figure 1.** Side views of excessive keloid formation in (A) right ear, (B) left ear; (C) posterior view of excessive keloid formation in both ears.

According to our expert committee’s scientific evaluation, which was confirmed by the literature, the development of hypertrophic scar and keloid formation is an undesired outcome that cannot be avoided by the surgeon regardless of the method he or she choose or the process they use. Reviewing the informed consent form revealed that the patient had received sufficient information about all surgical procedures, including the risks of keloid formation and hypertrophic scarring. Additionally, in compliance with legal procedure, patient consent was obtained within 24 hours prior to the treatment. The keloid formation that occurred under above mentioned situations was determined to be an undesirable consequence that, despite the anticipated method, could not be avoided, and it was decided that the doctor was not at fault. This scientific opinion was presented to the court.

**3. Discussion and Conclusion**

The doctors may be subject to criminal penalties, may be ordered to make compensation payments under civil law, and may be subject to administrative and medical chambers disciplinary actions because of medical malpractice claims. The most effective defenses that can keep doctors from punishing and paying compensation are compliance to patient rights, standards of care, and existing legislation. “Harm resulting from a doctor’s incapacity to treat a patient, lack of skillfulness, or failure to follow standard care procedure during treatment” is named as “medical malpractice” **[7]**. Considering the scientific and technical level that medical science has reached today, the environmental conditions in which the application is made, and the education level of the practitioner, the care that a physician should provide at the same level of competence under the same environmental conditions is described as the “average standard of attention and care” **[8]**. One of the most important conditions of standard care is to act in accordance with patient rights, and one of the most important patient rights is informed consent **[7]**.

For surgeons who performed plastic and reconstructive surgeries, proper implementation of all medical procedures and appropriate informed consent are defense arguments in criminal and disciplinary proceedings, but they are insufficient for compensation lawsuits. In Turkey, compensation lawsuits on this subject are carried out in accordance with the provisions of the Turkish Code of Obligations. Contracts signed between a patient and a physician or dentist working privately or in a public hospital for performing medical procedures such as aesthetic surgery or prosthesis application are covered by the artwork contract. Within the scope of artwork contract, the surgeon undertakes to deliver the work without any defects. The Supreme Court of Turkey considers aesthetic surgeries for “beautification” purposes, such as rhinoplasty, auricular correction, abdominoplasty, liposuction, breast reduction-augmentation-lifting, and hair transplantation, to be within the scope of artwork contracts **[9].**

Although the expert physician committee stated that the practice was a complication and did not assign fault to the surgeon, the physician was found to be at fault during the trial in accordance with Supreme Court case law, and compensation was awarded.

As a result, we think that an insurance system that is valid only for that surgery, as opposed to general or complementary health insurance, should be established before such aesthetic surgical operations. The implementation of such an insurance system will not only minimize unfounded malpractice claims against physicians, but will also compensate patients for material and moral harm.

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