Actas Dermosifiliogr. 2012;103(3):175–178

ACTAS Dermo-Sifiliográficas

Full English text available at www.elsevier.es/ad

OPINION ARTICLE

Program for Major Outpatient Surgery in Dermatology☆

Programa de cirugía mayor ambulatoria en dermatología

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Introduction

Surgery is an integral part of dermatology practice, one which we use to treat diseases and conditions affecting the skin and soft tissues, including mucosas and skin appendages, whenever those conditions cannot be treated medically and therefore require surgical intervention.[1] Dermatologic surgery comprises 4 general areas: oncologic, general, reconstructive, and cosmetic surgery.

Major outpatient—or ambulatory—surgery is defined by the Spanish Ministry of Health and Consumer Affairs as involving procedures or interventions of more or less complexity (regardless of type of anesthesia) after which the patient is discharged on the same day as surgery, following a variable period of monitoring and observation.[2] This concept is also referred to by other names, such as surgery without admission or the 23-hour model. Advances in highly or moderately complex surgical procedures and in anesthetic techniques have contributed to the rapid growth of major ambulatory surgery and all indicators suggest that there is a trend toward ever wider application of this model. The related concept of fast tracking refers to an accelerated care process in which the surgical patient has a very short stay in a recovery unit. The evident benefits of ambulatory surgery are that the patient can return home on the day of surgery and will enjoy a faster recovery. This model also frees up health care resources so that other patients can benefit from them or other procedures can be performed.

Units expressly dedicated to major ambulatory surgery have been established and promoted by the Spanish health authorities in recent years, and very clearly a large proportion of dermatologic surgery can be accommodated under this model.

Day surgery for major dermatologic procedures can be organized in various types of health care settings such as units attached to existing hospital departments, separate facilities, satellites of conventional hospitals, or remote centers far from any size or type of bed facility but affiliated with one. The evidence supporting this type of surgery in such settings is strong, and we concur that it is safe. Unlike other surgical specialties, dermatologists schedule many interventions that can be performed in adapted office settings under office-based anesthesia. A certain amount of debate followed a study by Vila and coworkers[3] that found the risk of adverse events and death to be higher after office procedures than after those performed in day surgery units; however Venkat and coworkers[4] later attributed the differences in the complication rates to design limitations and selection bias.This opinion paper aims to discuss major ambulatory surgery in dermatology, addressing the issues as follows: (1) the current status of this model in our specialty, (2) the future prospects for this approach in dermatology, (3) patient selection, (4) the preoperative visit, (5) complications, and (6) conclusions.

Consultations for skin tumors, which are increasingly common in today's dermatology practice, account for 20%–40% of caseloads according to some authors, and higher rates are reported for older populations.[5,6] The rise in the incidence of both melanoma and nonmelanoma skin cancers

☆ Please cite this article as: Cortiñas-Sáenz M, et al. Programa de cirugía mayor ambulatoria en dermatología. Actas Dermosifiliogr. 2012;103:175–8.

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has been demonstrated by various studies, not only in Spain but worldwide. In developed countries, the causes are principally changes in sun exposure habits and population aging. The fact that many of the patients we now see with operable tumors are older than in the past has often led us to consider the possibility of nonsurgical treatment as part of our best effort to prevent complications in individuals who often have concomitant diseases. Some authors, however, have found that the complications after outpatient dermatologic surgery in older patients develop in relation to the dermatologic process itself and the surgical technique rather than patient factors.[7]

Ambulatory surgery in this context is often appropriate for these older patients, as it allows for close observation in the hours leading up to and following surgery. However, since few studies of surgery in the ambulatory setting have focused specifically on dermatologic surgery, there is far less evidence available for our specialty than for other types in the abundant literature on general, ophthalmologic, gynecologic, and urologic day surgery programs among others.

Many hospitals in Spain, especially regional hospitals outside large cities, do not offer dermatologic procedures within their ambulatory surgery programs. The dermatologist must therefore refer patients to other surgical departments if they require postoperative observation, regardless of whether the case is complex because of the operation itself or because of patient factors.

Dermatologic surgery has a promising future in Spain, and given the characteristics of the surgical patients we treat, hospital managers should include the procedures dermatologists perform in their major ambulatory surgery programs. Such inclusion would produce benefits on all levels. The first to benefit would be the patient, who would avoid hospitalization or referral to surgeons in other departments. The dermatologist who has diagnosed the patient's condition would take charge of prescribing the appropriate surgical treatment and would of course be responsible for follow-up. Day surgery also allows younger patients to return to work promptly and older patients to resume daily activities sooner. Second, under this model the dermatologist remains in charge of the entire care process. Third, considerable savings—something hospital managers readily understand—would be the result of adopting this model; moreover, increased surgical activity and shorter wait lists would lead to overall improvement in the indicators currently used to measure hospital efficiency (mean adjusted or unadjusted stay in hospital, etc.).

Dermatologic surgery is a fundamental part of a dermatologist's practice, not only bacause it is the treatment of choice for many diseases we manage, but also of the exponential rise in the number of cases of skin cancer in the population. This increase means that many tumors are being treated by other physicians—such as specialists in family and community medicine—with all the risk this entails. The rise in the number of procedures performed by cosmetic technicians and estheticians may also increase the incidence of complications.[8,9]

We feel that setting up major ambulatory surgery services should be prioritized by dermatology departments that do not already offer them. For these services to function well, protocols must be developed to facilitate the selection of patients who are candidates for this surgical model and to guide postoperative follow-up, including after discharge.[10]

This important and highly effective way to organize surgery is a resource that must be monitored by means of appropriate information systems that provide hospital managers with data they can interpret. Managers will then perceive that a high quality of health care is being provided at lower cost, something to appreciate in these times of economic crisis.

The ongoing evaluation of ambulatory surgery programs is critical because it is the only way to detect complications that might develop. Furthermore, such evaluation can reveal aspects that can be improved and contribute to greater efficiency; assessment also brings to light ways to increase the satisfaction of patients and their families.[11] Creating scientifically and clinically high-quality programs for major ambulatory surgery is a cornerstone in our effort to show European and Spanish health care authorities that dermatology is a specialty that is indispensable for improving quality of life in today's society. Toward that end, coding systems for operating rooms and admissions should be improved to conform to diagnostic related groups.

Selecting patients for major ambulatory surgery is a key to obtaining optimal outcomes. In our experience, the inclusion criteria are the presence of large or multiple skin tumors requiring complex reconstructive procedures, significant underlying medical conditions, risk of intra- or postoperative complications, and a requirement for some type of anesthesia provided by an anesthesiologist (sedation, nerve block, or general or neuraxial anesthesia).

A unit equipped for this type of surgery should meet minimum safety, quality, and efficacy criteria to ensure that surgical and anesthetic complications are as few as possible. Our experience with performing major dermatologic surgery on an outpatient basis suggests that patients can be included no matter what their level of anesthetic risk according to the classifications of the American Society of Anesthesiologists (ASA) if they are appropriately managed and stable. Ambulatory surgery is ideal for patients with psychological disability because their normal routine will be disrupted as little as possible. In contrast, alcoholics and drug addicts might be poor candidates because of the possibility of withdrawal syndromes after anesthesia. Moreover, the economic situation of these patients may be precarious and their living conditions marginal, factors that make follow-up difficult.

In our major ambulatory surgery program, the main reasons for excluding a patient are social and cultural factors (living conditions, lack of an elevator or telephone, distance between home and hospital, etc.), and it is more difficult to assess such conditions than strictly medical ones.

The preoperative assessment visit is of capital importance in major ambulatory surgery, because proper patient selection is the first step in a successful program. A complete medical history and adequate cardiorespiratory evaluation are sufficient for most minor procedures; the patient's history may indicate that additional tests should be ordered. We believe that protocols for dermatologic surgery must be agreed upon between the anesthesiology and dermatology departments especially in the case of major ambulatory surgery. No studies have been done on which preoperative tests should be ordered before dermatologic surgery. In our practice settings, a chest radiograph and an

electrocardiogram are reserved for patients over the age of 60 years, smokers, or those with heart or respiratory disease. For major dermatologic day surgery patients we routinely order a complete blood workup and coagulation study. The purpose of the preoperative visit is to discover underlying diseases and minimize perioperative risks.[1] Anesthetic contraindications are established tentatively and normally decided on the basis of changes in the patient's clinical status. In our experience, the development of major medical complications is unrelated to the type of anesthesia, age, or ASA physical status classification. We believe that when patients have serious or decompensated systemic disease that limits their activity, it is prudent to operate only when an anesthesiologist is present. In our hospitals, preoperative findings are valid for up to 3 to 12 months, depending on patient comorbidity.

Infection prophylaxis before surgery is a quality-of-care criterion in major ambulatory surgery. The preoperative visit should therefore include an explanation of the measures that will be used to reduce the number of contaminating microorganisms (e.g., showering with germicide soaps and not shaving). Prophylactic antibiotics should probably be prescribed when a procedure involves mucosal sites, the nose, the groin, or Mohs surgery. Short-course antibiotic prophylaxis, with a single, should be prescribed. Antibiotic treatment (as opposed to prophylaxis) should be prescribed when the skin is inflamed or infected.

Progress in anesthetic and sedation techniques over the last 2 decades has noticeably pushed major ambulatory surgery forward. Approximately 85% to 95% of surgery in dermatology is performed under local anesthetic, often in the dermatologist's office. Therefore, our training must include the proper use of local anesthetics, the maximum allowable doses of each agent, and the early signs of overdose. We believe that major ambulatory surgery programs are ideal training grounds for dermatologic surgery. In our practices, we invite dermatologists to ventilate patients, position a manual self-reinflating bag (Ambu bag), perform orotracheal intubation, establish a peripheral venous line, and use various drugs.

The rates of complications in major ambulatory surgery in dermatology range from 5% to 8%.[12–14] Roughly speaking, we can identify 3 main types of complications, according to whether they derive from surgery, from anesthesia, or from patient comorbidity or concomitant therapy. A review of the literature shows that morbidity after dermatologic surgery is low.[13] However, we must remember that even when care is optimal, a small percentage of patients will develop complications after discharge. These complications may be caused by the intervention itself or by preexisting conditions that become decompensated during anesthesia and surgery. The most common complications reported are wound infections and bleeding.[14]

It is important to explain to the patient how to use the emergency service or telephone the dermatology department should such problems occur. In our experience, and in agreement with the recent findings of Paradela et al.,[15] the rate of complications is zero or very low even in patients of advanced age (over 85 years). The rate of unplanned admissions is under 3% in the geographical areas served by our hospitals and in most cases admissions are for minor complications such as hypertension, nausea and vomiting, or surgical wound pain. Major complications, in our experience, are related to prolonged interventions rather than patient comorbidity.

Conclusions

Major ambulatory surgery is an excellent multidisciplinary care model through which well selected dermatology patients can be treated effectively, safely, and efficiently. For this reason we think that this approach is of great importance for the practice of dermatologic surgery and that dermatologists are the ones who must demand it be given the prominence it deserves. Minor outpatient procedures account for most of the surgical caseload in our specialty. However, we predict that population aging and the rise in the incidence of melanoma and nonmelanoma skin cancer will make it necessary to handle major procedures on an outpatient basis too. We should be promoting this model within dermatology departments and convincing hospital administrators of its advantages, which benefit not only patients and dermatologists but also management, in that administrative costs are lower under major ambulatory surgery and resources are conserved.

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