

Blood Transfusion Requirements in Otolaryngology—Head and Neck Surgery

PAVEL DULGUEROV¹, DIDIER QUINODOZ¹, ABDELKARIM S. ALLAL², EDÖMER TASSONYI³ and PHIOTIS BERIS⁴

From the Division of ¹Head and Neck Surgery, ²Radio-oncology, ³Anesthetics, ⁴Hematology, University Hospital of Geneva, Geneva, Switzerland

Dulguero P, Quinodoz D, Allal AS, Tassonyi E, Bertis P. Blood transfusion requirements in otolaryngology—head and neck surgery. Acta Otolaryngol (Stockh) 1998; 118: 744–747.

Background: Blood requirements for Head and Neck surgical procedures have not been studied carefully. In order to set up an autotransfusion program, the blood loss and transfusion requirements should be known precisely. **Methods:** The blood bank database was used to determine which Head and Neck procedures required blood transfusion during the previous 5 years. A list of 10 transfusion-associated operations was established, the records of all patients who underwent these procedures during a 5-year period were reviewed, and average the blood loss and number of units transfused determined. **Results:** All procedures were for cancer resection. The operations were classified in 3 groups according to their transfusion probability: high (>80%), low (<5%) and moderate. For the moderate transfusion group, age, preoperative hemoglobin, and past medical history of cardiac and pulmonary disease were associated with higher incidence of transfusion. An average delay of 3 weeks was found between the diagnosis and the actual surgery. **Conclusion:** The transfusion requirements of Head and Neck surgical procedures could be safely met by an autotransfusion protocol, given the average delay of 3 weeks between diagnosis and surgery. **Key words:** blood loss, cancer, head and neck, surgery, transfusion.

INTRODUCTION

Head and Neck surgical operations are often associated with major blood loss requiring substitution, usually by homologous blood transfusion since other sparing techniques such as hemodilution and intraoperative blood recuperation are usually insufficient. Furthermore, intraoperative blood recuperation has not been reported for Head and Neck cancer operations, probably because it is oncologically unsafe (1). The risk related to homologous blood transfusions are well known (2, 3). In addition of the usual complications, some studies show an increase in the frequency of the cancer recurrences (4–9) and a higher incidence of postoperative infections (10, 11). While these topics are still controversial (12–16), there is growing interest in autotransfusion programs (2, 3). Autotransfusion requires better preoperative planning, an advance knowledge of the expected blood loss, and sufficient time gap between the diagnosis and the operation. The goal of this study is to retrospectively examine the intraoperative blood loss and transfusion requirements for the various types of Head and Neck surgical procedures.

MATERIALS AND METHODS

This is a retrospective study of patients operated in the Otolaryngology—Head and Neck Surgery Department of the University of Geneva between 1990 and 1995. The blood bank database was used to identify patients receiving blood transfusions. Patients who were transfused but not operated on were

excluded (most of these cases were secondary to epistaxis or chemotherapy related anemia).

Blood was requested for 14 types of surgical procedures. A total of 259 patients underwent one of these operations and their records were analyzed, independently of the transfusion status. Thirty two patients were excluded because their charts could not be located or because the information was incomplete.

A total of 227 charts were reviewed, analyzing the following parameters: the estimated intraoperative blood loss, the number of blood units transfused during or after surgery, the age of the patient, his/her cardiac and pulmonary medical history, the preoperative and postoperative hemoglobin and hematocrit, and the delay between diagnosis and actual surgery.

For each procedure, the parameters known before the operation were compared between transfused and non-transfused patients. Age and preoperative hemoglobin were analyzed using the Student *t*-test and incidence of past medical history was assessed with the χ^2 test and statistics.

RESULTS

All operations requiring a blood transfusion were oncologic procedures for resection of Head and Neck cancer. No otologic, nasal sinus or facial plastic procedure required a transfusion during the study period.

In the 227 patients, there were 41 women (18%) and 186 men (92%). The average age was 58.7 ± 9 years.

