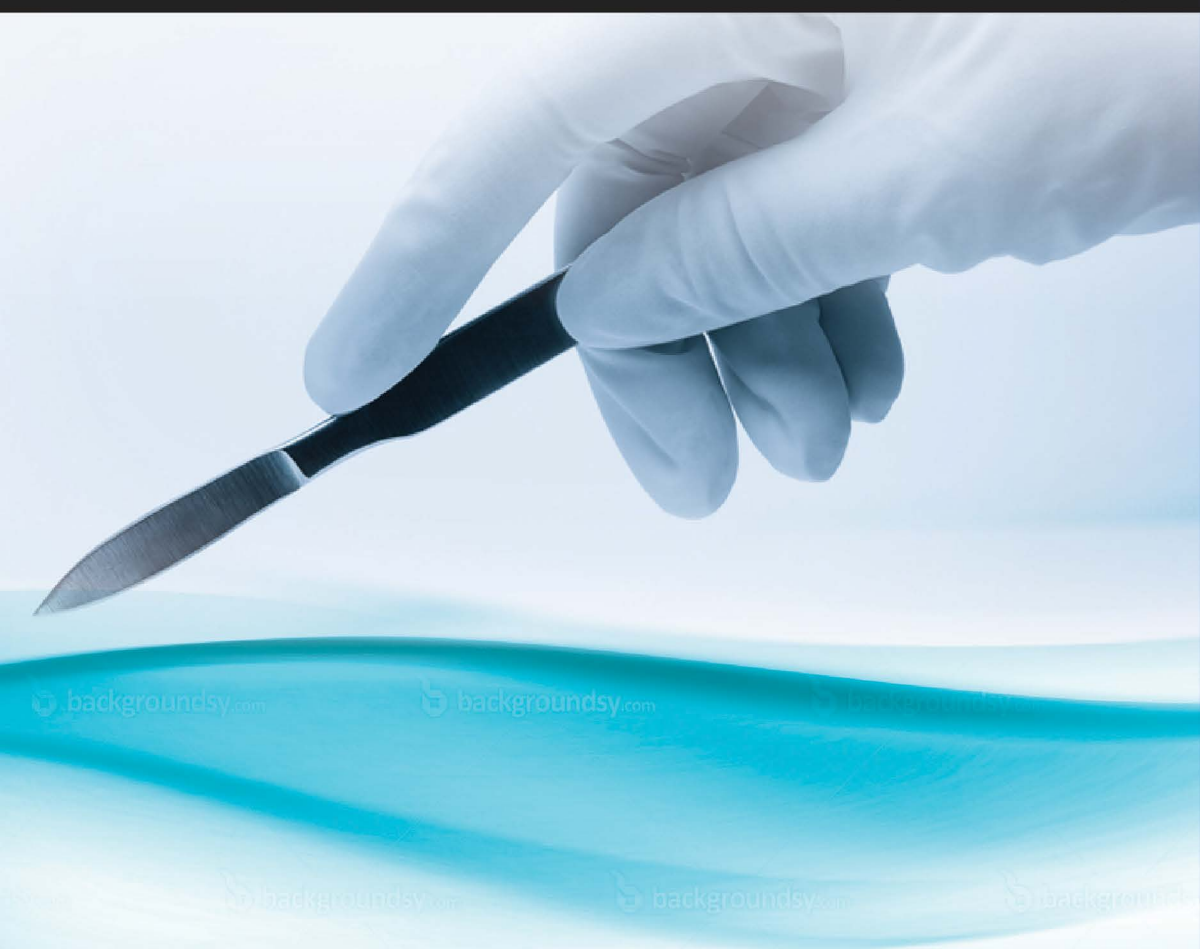
others.com, for detailed information on surgery books, visit our website www.jaypeebrothers.com, for detailed information on surgery books

SURGEON'S KNIFE

HEAD & NECK INCISIONS



Mohammad Akheel

Co-author
Ashmi Wadhwania

Forewords
Jatin P Shah
Iype Cherian
Mayte Pinilla Urraca

JAYPEE

Contents

1.	Fourth Dimension of Face	1
2.	Principles of Incision	2
3.	Concepts of Incision	6
4.	Principles of Reconstruction	9
5.	Third Molar Impactions	10
6.	Maxillofacial Fractures	13
7.	Space Infections	24
8.	Neoplasms	26
9.	Cleft Lip	44
10.	Cleft Palate	49
11.	Temporomandibular Joint	51
12.	Flaps	60
13.	Aesthetic Surgery	74
Bibliography		*79*
Index		*81*

CHAPTER

2

Principles of Incision

JAYPEE BROTHERS

"KNOW YOUR ANATOMY BEFORE YOU PLACE AN INCISION"

INTRODUCTION

The surgery is often successful when the area to be operated is exposed enough for the surgeon's visibility, accessibility and his instrumentation. As mentioned in Ellis textbook, in orthopedic surgery, especially of the long bone fractures, the basic rule is to have a direct approach to fix the underlying fracture. Therefore, irrespective of important and vital structures, incisions are often placed on or near the fracture site and this involves minimal or no aesthetic concerns.

Head and neck surgical incisions differ from those orthopedic incisions with major concern being the facial aesthetics. Often the incision is placed away from the operated site in the inconspicuous area of the head and neck which can provide enough access and exposure to the operating surgeon. Placing an incision in conspicuous area can create a facial deformity and disharmony which can in turn create a low social self-esteem. In the era of 21st century, aesthetics is the prime importance and a demand of every patient, doesn't matter how severe is the problem. In this atlas, all the incisions are portrayed which are placed in inconspicuous areas of face. To know the planning of incision, one must be thorough of head and neck muscles, most importantly muscles of facial expression.

While placing the incision in head and neck region, one must be careful about its underlying important vital structures. Most important is Cranial Nerve VII (facial nerve). Damage to any of the branches of facial nerve supplying its muscle of facial expression can paralyze the face causing severe facial disharmony.

What is a scalpel or a knife?

Surgical scalpel is like a blade which consists of two parts: a blade and a handle. In these, the handles are reusable (autoclavable) while blades are used only

once even when for a small cuts. Hence, they have to be replaced after single use. The handle is also known as "B.P." handle. It is named after Sir Charles Russell Bard and Sir Morgan Parker, founders of the Bard-Parker Company.

The handle of medical scalpels come in two basic types. The first is a flat handle used in the #3 and #4 handles. The #7 handle is more like a long writing pen, rounded at the front and flat at the back. A #4 handle is larger than #3. Blades are manufactured with a corresponding filament size so that they fit on only one size handle.

Surgical Blades

Different types of surgical scalpel blades are discussed in Table 1.

TABLE 1: Types of surgical scalpel blades

Blade No.	*Compatible Handles*	*Blade Description*	*Uses*
No. 10	B3, 3, 3 Graduated, 3 Long, 5, 7, 9	Curved cutting edge with an unsharpened back edge. A more traditional blade shape	Generally for making incisions in skin and muscle. Commonly used to cut the skin in abdominal operations
No. 11	B3, 3, 3 Graduated, 3 Long, 5, 7, 9	Triangular blade with sharp point, flat cutting edge parallel to the handle and flat back	For precision cutting, stripping, sharp angle cuts and also stencil cutting due to its similarity to the X-Acto art knife blade
No. 15	B3, 3, 3 Graduated, 3 Long, 5, 7, 9	A smaller version of the #10	For the same general use as the #10 blade
No. 15C	B3, 3, 3 Graduated, 3 Long, 5, 7, 9	The #15 with a downward angle, flatter and thinner than the #15	The downward angle makes this the preferred blade for working within the chest during cardiac surgery, and is commonly used to make the distal arteriotomy during coronary artery bypass grafting
No. 16	B3, 3, 3 Graduated, 3 Long, 5, 7, 9	A narrow chisel-like blade with flat, angled cutting edge, positioned higher than the axis of the handle	For cutting stencils, scoring and etching
No. 17	B3, 3, 3 Graduated, 3 Long, 5, 7, 9	A flat face 1.6 mm chisel blade	For narrow cuts
No. 18	4, 4 Graduated, 4 Long, 6	A 12.7 mm chisel blade	For deep cuts and scraping
No. 20	4, 4 Graduated, 4 Long, 6	A larger version of the #10 blade, with a curved cutting edge and a flat, unsharpened back edge	Used in general surgery and orthopedic surgery

Contd...

JAYPEE BROTHERS

Contd...

No. 22	2, 4, 5, 6	A slightly larger version of the #20, with a curved cutting edge and a flat, unsharpened back edge	Used for skin incisions in both cardiac and thoracic surgery, and to cut the bronchus in lung resection surgery
No. 23	4, 4 Graduated, 4 Long, 6	Similar to #22, leaf-shaped	For long incisions
No. 24	4, 4 Graduated, 4 Long, 6	A wide, flat, angled cutting edge	For corner cuts, trimming, stripping, and cutting mats and gaskets
No. 36	4, 4 Graduated, 4 Long, 6	A larger blade	Used in general surgery but also within a Laboratory setting for Histology and Histopathology

Basic principles

Following factors are important when the incision is being planned. They are patient's gender, age, amount of lax skin, anatomical disturbances and his/her expectations. The age of the patient is important because of the presence of wrinkles and lax skin which can hide the incision in natural skin lines. Existing anatomic features that are unique to the individual can also facilitate or hamper incision placement. For example, any preexisting scar can hamper the placement of fresh incision. In most of the cases, this scar can be used to expose the underlying skeleton or area to be operated. Patient's expectations and wishes must always be considered in any decision about location of an incision.

Principles of Placing an Incision

The following steps are important to place an incision:

1. Incisions are placed by holding the knife at 45°–50° to the skin.
2. Incisions are placed in inconspicuous area of face.
3. If given an option of extraoral or intraoral incision, preference should be given to intraoral incision.
4. Avoid important neurovascular structures when you place an incision.
5. The length of the incision must be restricted to provide enough working space for accessibility, visibility and instrumentation.
6. The depth of the incision must be till subdermal layer.
7. Place the incision perpendicular to the surface of nonhair bearing skin. Incisions placed obliquely to the surface of skin are susceptible for marginal necrosis.
8. Place the incision in the lines of minimal tension also called as relaxed skin tension lines. These lines are skin's adaptation to function and the elastic nature to the underlying dermis. The chronic contractions of the muscles

JAYPEE BROTHERS

create deep creases. These lines are good choice to place an incision and the resulting scar is hidden.

9. If incisions cannot be placed in inconspicuous areas, get help from local anatomical structures. For example, place the incision intraorally, nose, ear, eyelid or inside the hair bearing area.
10. Closure of incisions of surgical sites must be in layers to prevent contracture of tissues.

JAYPEE BROTHERS

or detailed information on surgery books, visit our website **www.jaypeebrothers.com,** for detailed information on surgery books, visit our web

SURGEON'S KNIFE
HEAD AND NECK INCISIONS

Salient Features

- An outstanding compendium on the subject
- Presents a summary of all facial and skull incisions from the oldest to the most current ones
- Provides surgical approaches for congenital conditions, trauma and tumor surgery as well as reconstructive surgery
- Covers all incisions of head and neck region providing a valuable piece of information
- Useful for students and trainees of maxillofacial surgery, dental surgery, otolaryngology, general surgery, head and neck surgery and plastic surgery.



Mohammad Akheel BDS MDS FHNCS FADI FIIHNO is an Associate Head and Neck Oncosurgeon, Department of Surgical Oncology, The Convenient Hospital Ltd. (CHL)–Comprehensive Blood and Cancer Center (CBCC), and Visiting Consultant, Global SNG Hospitals and Shalby Hospitals, Indore, Madhya Pradesh, India. He was a Senior Registrar in the Department of Head & Neck Surgical Oncology, HCG Curie Manavata Cancer Center, Nasik, Maharashtra, India. He has completed his Fellowship in head & neck cancer surgery from same institute. He has completed his Masters in dental surgery in oral and maxillofacial surgery from Narayana Dental College and Hospital, Nellore, Andhra Pradesh and Bachelors in Dental Surgery from Thai Moogambigai Dental College and Hospital, Chennai, Tamil Nadu. He is a Fellow of American College of Surgeons and Fellow of Academy of Dentistry International. He is the Founder and CEO of 3 international journals and the Editor of 13 international medical and dental journals. He has 71 international peer-reviewed publications. He has published 5 books. He has been awarded Indian Dental Oscar award for the best PG student of the year twice in 2014. He is a part of various other organizations in India and abroad. He is aspiring to be head & neck skull base surgeon and microvascular surgeon.

Available at all medical bookstores
or buy online at www.jaypeebrothers.com



JAYPEE BROTHERS
Medical Publishers (P) Ltd.
www.jaypeebrothers.com

Join us on facebook.com/JaypeeMedicalPublishers

Shelving Recommendation
SURGERY

ISBN 978-93-86056-86-3