

CASE REPORT

UNUSUAL HIGH OPENING OF SUPRA ORBITAL FORAMEN- A CASE REPORT SEEN IN 3 DRY SKULL BONES

Gokul Krishna Reddy Nune¹, Minati Patra², K. Rama Rao³

HOW TO CITE THIS ARTICLE:

Gokul Krishna Reddy Nune, Minati Patra, K. Rama Rao. "Unusual High Opening of Supra Orbital Foramen: A Case Report seen in 3 Dry Skull Bones". Journal of Evidence Based Medicine and Healthcare; Volume 1, Issue 5, July 2014; Page: 284-287.

ABSTRACT: Supra orbital foramen is present in the form of a notch or foramen, usually at the junction of outer 2/3rd and inner 1/3rd of the supra orbital rim but this position is highly variable. During routine osteology teaching to students, supra orbital foramen was found on the frontal bone that opened at the middle of the superior ciliary arch. This opening was high up compared to earlier studies, the anatomy and knowledge of the opening of the supra orbital foramen has clinical significance during forehead, coronal, brow lift surgeries, during supra orbital block (migraine), probing of the nasolacrimal duct in cases where spontaneous opening absent.

KEYWORDS: supra orbital foramen, supra orbital notch, supra orbital nerve.

INTRODUCTION: Supra Orbital Foramen is present in the form of a Notch or Foramen, usually at the junction of outer 2/3rd and inner 1/3rd of the Supra orbital Rim but this position is variable.^{1,2,3} This arches transversely below the Super Ciliary Arch and the upper part of the margin of the Orbit³. During routine osteology scrutiny, Supra orbital foramen was observed on the Frontal bone, opening at the middle of the Super Ciliary Arch. This opening was high up compared to earlier studies.

MATERIALS AND METHODS: Anatomical variation of SOF was studied in Frontal bones bilaterally, using "Vernier's callipers".

The parameters used:

1. Distance between the SOF and the Nasion
2. Shape
3. Vertical Diameter of the SOF
4. Transverse Diameter of the SOF
5. Presence of Accessory S.O Foramina (ACF) and if present VI) their Number.

CASE REPORT



CASE REPORT

OBSERVATION:

	Right side	Left side
Distance from SOF to Nasion	1 st skull - 22.06mm	1 st skull - 26.08mm
	2 nd skull - 24.00mm	2 nd skull - 26.01mm
	3 rd skull - 22.04mm	3 rd skull - 24.04mm
Vertical Diameter	1 st skull - 03.04mm	1 st skull - 03.50mm
	2 nd skull - 03.00mm	2 nd skull - 03.08mm
	3 rd skull - 03.03mm	3 rd skull - notch is seen
Transverse diameter	1 st skull - 02.34mm	1 st skull - 03.12mm
	2 nd skull - 02.30mm	2 nd skull - 02.50mm
	3 rd skull - 03.04mm	
Accessory S.O.Foramen	Not seen in all 3 skulls	Seen in 2 nd & 3 rd Skulls one each.

Clinical importance: The Supraorbital Nerve is one of the main Cutaneous nerve (branch of Frontal branch of Ophthalmic nerve) supplying the Forehead and Scalp region.³ It exits through this foramen along with Supra orbital vessels to innervate the Skin and may be injured during various Surgical and Anaesthetic procedures in the Fore Head and procedures such as Closure of Facial Wounds, Biopsies in Fore Head, other Cosmetic cutaneous procedures and Probing of the Nasolacrimal Duct in cases where opening is blocked.^{1, 2}

Excessive dissection and retraction close to such neurovascular bundles can cause scarring, which may lead to entrapment Neuropathies and painful Neuralgias.^{1, 2}

Clinicians must be aware of the exact position of SOF / SON while diagnosing conditions like Supraorbital Neuralgia, as it is normally characterized by forehead pain and tenderness over the SON/SOF.^{1, 2}

Symptoms:

1. The injury of Supraorbital Vessels may lead to Hematoma formation in the Sub Galeal plane³
2. Anaesthesia or Hypoesthesia of the Forehead in Nerve injuries.³
3. Ischemia or Necrosis of parts of the Forehead (in region where this nerve supplies) and hair loss in Cosmetic Surgeries.^{1, 2}
4. Irritation, Entrapment and/or compression of the Supraorbital Nerve lead to frontal triggers of Migraine headaches. (Corrugator Super ciliary muscle resection is useful in such patients).^{1, 2}

REFERENCES:

1. Ashwini LS, Mohandas Rao KG, Sharmila Saran, Somayaji S.N, Morphological and Morphometric Analysis of Supraorbital Foramen and Supraorbital Notch: A Study on Dry Human Skulls. (Department of Anatomy, Melaka Manipal Medical College (Manipal Campus). Received: 21 Nov2011 / Accepted: 21 Feb 2012 Oman Med J. Mar 2012; 27(2): 129–133.

CASE REPORT

2. Koreans, Morphometric Analysis of Supraorbital Foramen and Supraorbital Notch: A Study on Dry Human Skulls (Korean J Pain 2013; 26: 130-134).
3. Grays Anatomy, 40th Edition (Pg 633-634).

AUTHORS:

1. Gokul Krishna Reddy Nune
2. Minati Patra
3. K. Rama Rao

PARTICULARS OF CONTRIBUTORS:

1. Post Graduate Student, Department of Anatomy, Kalinga Institute of Medical Sciences, KIIT University, Bhubaneswar.
2. Professor, Department of Anatomy, Kalinga Institute of Medical Sciences, KIIT University, Bhubaneswar.
3. Professor and HOD, Department of Anatomy, Kalinga Institute of Medical Sciences, KIIT University, Bhubaneswar.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Gokul Krishna Reddy Nune,
Department of Anatomy,
Kalinga Institute of Medical Sciences,
KIIT University, Campus-5,
Patia, Bhubaneswar, Odisha – 751024.
E-mail: gkr.nune@gmail.com

Date of Submission: 08/07/2014.
Date of Peer Review: 09/07/2014.
Date of Acceptance: 14/07/2014.
Date of Publishing: 17/07/2014.