ORIGINAL RESEARCH PAPER

Volume-7 | Issue-7 | July-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

CRANIOSYNOSTOSIS-AN EPIDEMIOLOGICAL STUDY IN A TERTIARY CARE INSTITUTE

Neurosurgery

Dr.A.Dhanasekar MADRAS MEDICAL COLLEGE/RGGGH

Prof.r.raghavendran MADRAS MEDICAL COLLEGE/RGGGH

ABSTRACT

Aim:- To study the epidemiology, common types, treatment and prognosis of craniosynostosis in 12 cases presented in RGGGH, chennai between Aug 2015- Aug 2017.

Materials and methods:- 12 cases who were admitted in RGGGH between Aug 2015 and Aug 2017 with the diagnosis of craniosynotosis were studied. Their demographics were documented, followed up and treatment and prognosis recorded. The data was analysed using SPSS

Results :- 7 male and 5 female children were studied. Commonly involves sagittal suture. Strip craniectomy with or without frontal advancement was the commonest surgical procedure. Post –operatively all the patients had good cosmetic results

Conclusion :- Early identification and corrective surgery for craniosynostosis is imperative to prevent potential long term complications and sequlae

KEYWORDS

Craniosynostosis, Strip Craniectomy

INTRODUCTION:

In Craniosynostosis one or more cranial sutures close prematurely into ossification , thereby altering the growth pattern and expansion of skull resulting in an abnormal head shape and facial features .In cases in which the compensation does not provide enough space for the growing brain , craniosynostosis results in increased ICP , visual ,sleep and mental development impairment.

AIM AND OBJECTIVES:

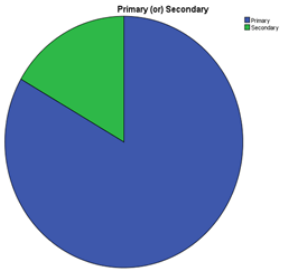
To study the epidemiology of craniosynostosis for a two year period in Rajiv Gandhi Government General hospital(RGGGH),a tertiary care Referral Government Institute, chennai .

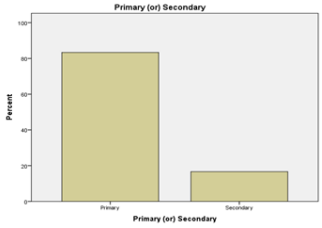
MATERIAL AND METHODS : All the 12 cases admitted in RGGGH between August 2015 and August 2017 with a diagnosis of craniosynostosis were included in the study. Their demographics were documented , treatment , prognosis and followup were recorded and analysed using SPSS.

S.No	age	sex	Primary (or) Secondary	Syndromic (or) Non-Syndromic	No. of Sutures (involved)	Suture	Consanguinity	Delayed Milestone	siblings	raised ICP	Visual Impairment	Associated Congenital Anomaly	Treatment	Prognosis
1	1 Month	F	Primary	Non-Syndromic	2	bilateral Coronal	yes	no	1st child	-	-	-	Conservative	no Follow up
2	6 Months	F	Secondary	Syndromic (aperts)	5	All Sutures	no	yes	1st child	-	-	syntactyly/microcephaly	Conservative	no Follow up
3	2 Yrs	F	Secondary	Syndromic (crouzen's)	3	bilateral Coronal/sagittal	yes	yes	2nd /1st child(spontaneous abortion)	yes	yes	-	Strip Craniectomy &Frontal Advancement	no improvement
4	7 Months	M	Primary	Non-Syndromic	1	Sagittal	no	yes	1st child	yes	yes	Dandy walker varient	Strip Craniectomy	improved
5	10 Months	M	Primary	Non-Syndromic	1	Sagittal	yes	yes	1st child	-	-	-	Strip Craniectomy	improved
6	11 Months	M	Primary	Non-Syndromic	3	Metopic/ bilateral Coronal	no	yes	2nd /1st child(normal)	-	-	-	Strip Craniectomy	improved
7	6 Months	F	Primary	Non-Syndromic	1	Sagittal	no	no	1st child	-	-	-	Strip Craniectomy	no Follow up
8	8 Months	F	Primary	Non-Syndromic	1	Sagittal	no	yes	1st child	-	-	-	Strip Craniectomy	improved
9	8 Months	M	Primary	Non-Syndromic	2	rightCoronal/Sagittal	no	yes	1st child	-	-	-	Strip Craniectomy	improved
10	2 Yrs	M	Primary	Non-Syndromic	1	Sagittal	yes	yes	2nd /1st child(normal)	-	-	-	Strip Craniectomy	improved
11	18 Days	M	Primary	Non-Syndromic	3	bilateral Coronal/ Sagittal	yes	no	1st child	-	-	-	Conservative	no Follow up
12	4 Yrs	M	Primary	Non-Syndromic	3	Metopic/ bilateral Coronal	no	yes	1st child	-	-	Hypothyroidism	Strip Craniectomy	improved

RESULTS AND DISCUSSION

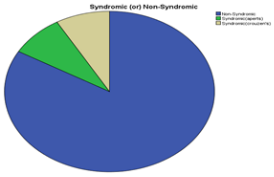
PRIMARY OR SECONDARY

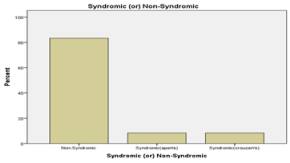




83.3%WERE PRIMARY AND 16.7% WERE SECONDARY, MAJORITY OF CASES WERE PRIMARY.

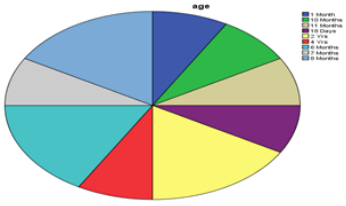
SYNDROMIC OR NON-SYNDROMIC

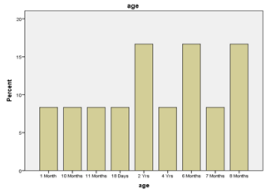




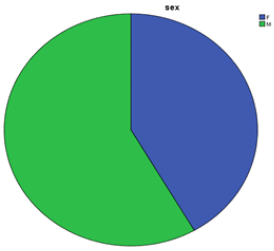
83.3% WERE NON- SYNDROMIC AND16.7% WERE SYNDROMIC.

AGE

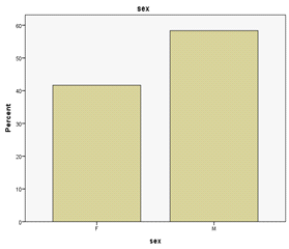




IN 12 PATIENTS 91.7%WERE BELOW 2YEARS AND 8.3% WERE ABOVE 2 YEARS AT THE TIME OF PRESENTATION TO THIS INSTITUTE.

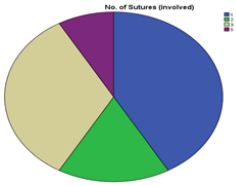


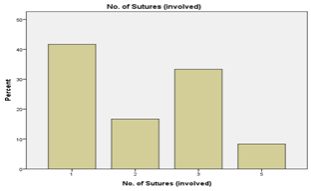
SEX



58.3% WERE MALES AND 41.7% WERE FEMALES SHOWING SLIGHT MALE PREPONTRANCE

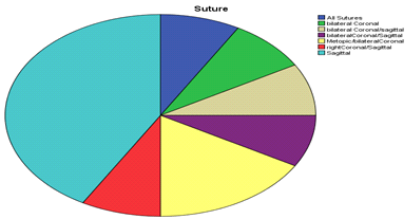
NUMBER OF SUTURES INVOLVED

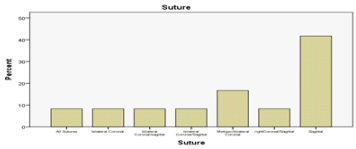




41.7% WERE INVOLVED WITH SINGLE SUTURE,16.7% WERE INVOLVED WITH TWO SUTURES,33.3%WERE INVOLVED WITH THREE SUTURES,8.3% WERE INVOLVED WITH ALL SUTURES,SHOWING SINGLE SUTURE INVOLVEMENT IS MORE COMMON THAN MULTIPLE SUTURES.

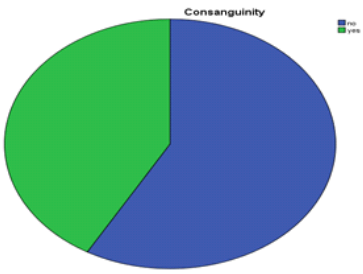
SUTURES INVOLED





IN SINGLE SUTURAL INVOLVEMENT SAGITTAL SUTURE IS COMMENEST(41.7%). WHEN MULTIPLE SUTURES ARE INVOLVED CORONAL AND METOPIC SUTURES ARE COMMENLY INVOLVED.

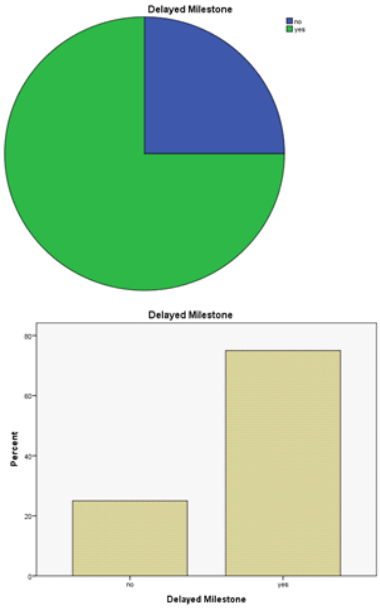
CONSANGUINITY



41.7% OF CASES WERE INVOLVED IN CONSANGUINITY BUT 58.3% WERE OF NON-CONSANGUINITY,

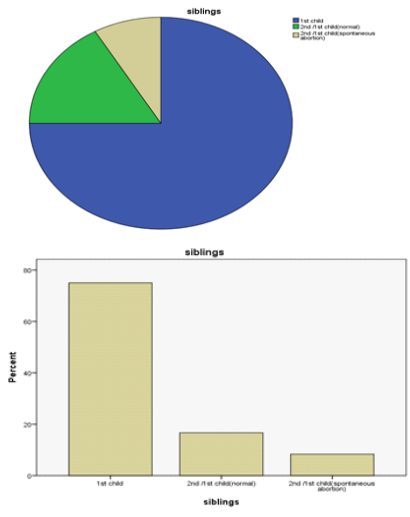
SHOWING CONSANGUINITY ALSO HAS ROLE IN CRANIOSYNOSTOSIS.

DELAYED MILESTONE



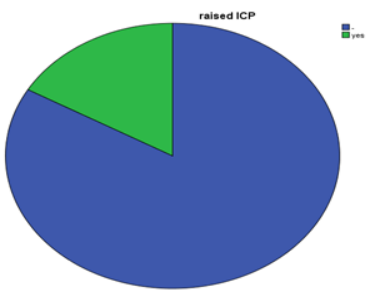
75% WERE PRESENTED WITH DELAYED MILE STONE AND COMMONEST COMPLAINT WHICH BROUGHT THE PATIENT TO INSTITUTE.

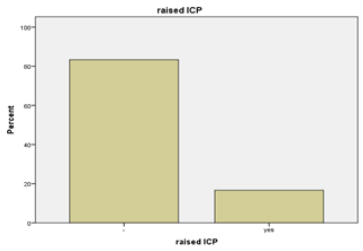
SIBLINGS INVOLVEMENT



PREDOMIENTLY THE FIRST CHILD(75%) IS AFFECTED THE MOST.

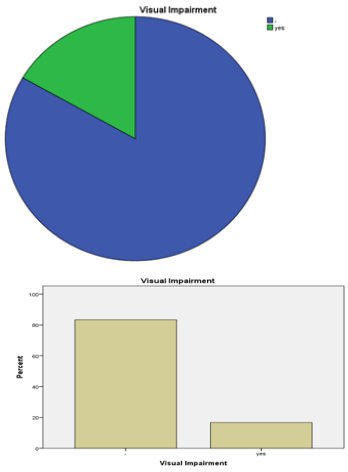
RAISED ICP





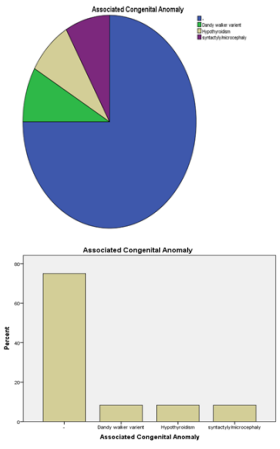
ONLY 16.7% CASES PRESENTED WITH RAISED ICP BUT MAJORITY 83.3% WERE PRESENTED NORMALLY.

VISUAL IMPAIRMENT



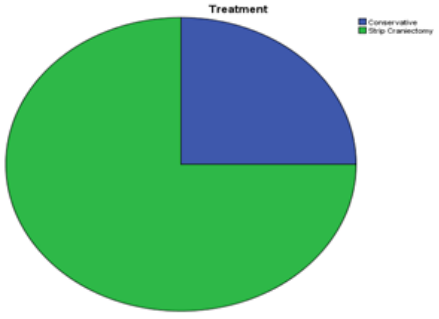
16.7% CASES PRESENTED WITH VISUAL IMPAIRMENT.

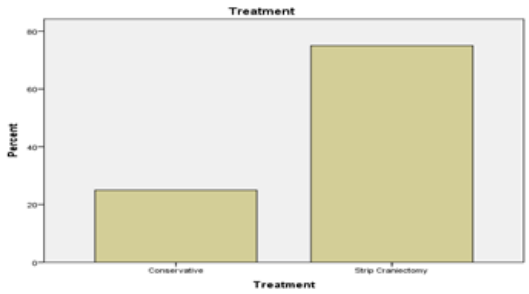
CONGENITAL ANOMALIES



24.9% CASES PRESENTED WITH ASSOCIATED CONGENITAL ANOMALIES,OF WHICH 8.3% WITH HYPOTHYROIDISM,8.3% WITH MICROCEPHALY AND SYNDACTYLY,8.3% WITH DANDY WAKER VARIENT.

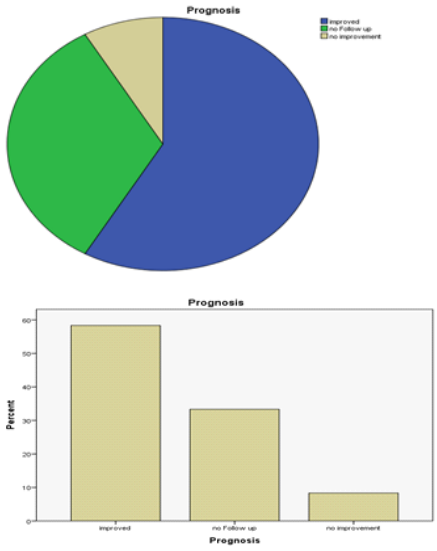
TREATMENT





75% CASES WERE OPERATED (STRIP CRANICTOMY) AND 25% CASES WERE MANAGED CONSERVATIVELY.

PROGONSIS



58.3% OF CASES SHOWED IMPROVEMENT AFTER OPERATIVE MANAGEMENT, 33.3% OF CASES WERE LOST FOR FOLLOWUP AND 8.3% OF CASES SHOWED NO IMPROVEMENT.

CONCLUSION:

Patients who were presented early and operated early showed good improvement in terms of mental status and cosmesies. Hence, early identification and corrective surgery for craniosynostosis is imperative to prevent potential longterm complication and sequalae.