Original article:

Study of incidence of CVST in urban population

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Abstract:

Introduction: Cerebral venous sinus thrombosis (CVST), first described by Ribes in 1825, is a disease with potentially serious consequences which usually affects young to middle aged people.

Methodology: The study was carried out at a Padmashree Dr.D.Y.Patil Medical College Pimpri Pune . The study spanned over a period from June 2009 to September 2011. A total of 62 cases of CVST confirmed by radio imaging were included in the   study.

Results : The mean age of the patients in the present study was 28 ± 8.95. Majority of them were in the age group 21-30 years contributing to 59.67%. The youngest age being 18 and oldest 55 years. In the present study 80.95% cases were in the age group of 21-30 in pregnancy and puerperal group, 53.84% cases in idiopathic group and 50% cases in secondary group. Mean age for females: 26.84 ± 6.67, Mean age for males: 29.83 ± 11.63, Bartlett's Test for Inequality of Population Variances, Barlett's chi sq = 8.9264, df = J , p = 0.0028. Kruskal-wallis test for two groups: Equivalent to Chi sq = 0.0757, df = 1, p = 0.7832.

Conclusion: It can affect all age gronps but young and middle aged women appear at particular risk.

Introduction:

Cerebral venous sinus thrombosis (CVST), first described by Ribes in 1825, is a disease with potentially serious consequences which usually affects young to middle aged people.[1] The incidence of CVST is unknown and is reported to be more common in developing countries.[2] Most reported incidences are based on autopsy studies and range from 0.1% of 12,500 consecutive autopsies to 9% of all deaths resulting from cerebrovascular causes[3]. All age groups can be affected. With this background present work was planned.

Methodology:

The study was carried out at a Padmashree Dr.D.Y.Patil Medical College Pimpri Pune . The study spanned over a period from June 2009 to September 2011.

A total of 62 cases of CVST confirmed by radio imaging were included in the   study.

All patients admitted to the hospital with a CT scan /MRI/MRV finding diagnostic of CVST were included in the study. Those with confirm diagnosis of CVST were taken up for analysis.

Exclusion criteria:

- All patients less than 18 yrs of age.

- Patients of stroke due to arterial cause.

A detailed history from patient and relatives was obtained. Detailed clinical examination was recorded in each case as per proforma. All patient were subjected to CT scan and MRI/MRV as per feasibility to confirm diagnosis and localization of CVST.

Observations:

TABLE 1.AGE AND SEX DISTRIBUTION OF TOTAL CASES STUDIED n=62

AGE(yrs)	MALE	FEMALE	TOTAL	%
<20	5	5	10	16.12
21-30	11	26	37	59.67
31-40	3	5	8	12.90
41-50	3	2	5	8.06
51-60	2	0	2	3.22
TOTAL	24	38	62	100

The mean age of the patients in the present study was 28 ± 8.95. Majority of them were in the age group 21-30 years contributing to 59.67%. The youngest age being 18 and oldest 55 years. In the present study 80.95% cases were in the age group of 21-30 in pregnancy and puerperal group, 53.84% cases in idiopathic group and 50% cases in secondary group. Mean age for females: 26.84 ± 6.67, Mean age for males: 29.83 ± 11.63, Bartlett's Test for Inequality of Population Variances, Barlett's chi sq = 8.9264, df = **J,** p = 0.0028. Kruskal-wallis test for two groups: Equivalent to Chi sq = 0.0757, df = 1, p = 0.7832.

Discussion:

CYST is not so rare but an alarming disease usually beginning with severe headache and may lead to seizures, neurological deficit and even death. It has been reported to cause 10-20% of young strokes in India. No epidemiological data is available hence the exact incidence is debatable. Many western studies have a small number of patients or have been done over a large number of years .Most Indian studies have fairly large number of cases there by suggesting that the incidence here is not so rare as previously thought of and should be considered in all cases of young stroke and neurological syndromes in appropriate setting. Like all other studies we also had a similar demographic picture.[4]

CYST is a disease of young people. According to an Indian study, it is a major cause of stroke in young population with a mean age of 32.27 years and therefore should be considered in all cases of young stroke and neurological syndromes in appropriate setting.[5] In 1992, Ameri and Bousser reported a uniform age distribution in men with CYT, while 61% of women with CYT were aged 20-35 years. [6] This may be related to pregnancy or the use of oral contraceptives. Comparing the age group involved, 20-40 years was the commonest age group involved in vaiious series (Mehta SR et al. 77.8% and Ameri et al. 61%).[7]

Analysis of the data of present study revealed that all age groups are affected however 59.67% of the cases belong to age group of 21-30 yrs. The youngest age being 18 and oldest 55 years. Our sh1dy matches the reports of Parikh et al[8] where 55% cases belong to age group of 21-30. When we consider age group depending on the sex (table 6) we find that in case

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of females almost 70% of the cases are seen in age group of 21- 30 yrs, higher preponderance than males in this age group is being due to reproductive age group and use of oral contraceptives to some extent.

Thus we found that CYST affects all age groups inespective of the etiological factor but tends to affect predominantly the young adults (70%) in age group of 21-30. A total number of 62 cases were studied .There were 38 females (61%)and 24 males(38%). Male to female ratio being 1:1.58.

CVT is believed to be more connnon in women than men. In a series of 110 cases, Ameri and Bousser found a female-to-male ratio of 1.29:1.[5] Ferro et al[9] made the same observations in a prospective study from 1995 to 1998. This slight preponderance in females is probably due to specific causes such as oral contraceptives, pregnancy and pueperium. This preponderance of females did not exist before the era of the oral contraceptive pills.

In International Study on Cerebral Venous Sinus Thrombosis(ISCVT)4 [9] 2001 ,624 . cases from 89 centres and 2 lcountries were registered.The male to female ratio found was 1:2.9

Conclusion:

It can affect all age gronps but young and middle aged women appear at particular risk.

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