THE EFFECT OF CONSANGUINEOUS MARRIAGES ON CONGENITAL MALFORMATIONS OF CHILD

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SUMMARY

Eighty cases of consanguineous (30 families) and non-consanguineous (50 families) marriages were studied in and around Nagpur and full details about the nature of birth defect in children were collected. It was found that 30% children have birth defects of some type or other in consanguineous marriages whereas it was 37.13% in non-consanguineous marriages. The same way 17 families (56.67%) were affected due to consanguineous marriages but 74% families were affected in non-consanguineous marriage.

The above observation indicates that consanguineous marriage is not a major factor causing birth defects.

INTRODUCTION

A recent survey by ministry of social welfare (Government of India) indicates that 2% of Indian population are mentally retarded or abnormal. The percentage of physically handicapped is still more. So the need of the hour is to give a serious thought to find out the reason for all types of congenital malformations and to find a remedy for the same.

In this paper emphasis is given to find out the effect of consanguineous marriages on the state of health of the offspring vis-a-vis non-consanguineous marriages.

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MATERIAL AND METHODS

Since consanguineous marriages are more common in Muslim community, among South Indians and Maharashtrians more concentration was given to study the state of health of children of the above community in and around Nagpur.

Different social welfare organization were approached who are doing a yeoman service for the rehabilitation of physically handicapped and mentally handicapped children. From them the parental address of the affected children were collected and were interviewed to observe whether the marriage was consanguineous or not.

For the sake of interview the questions

asked to parents were as follows.

(1) Their name, age, when married.
(2) No. of children, male and female.
(3) Whether normal or abnormal.
(4) If abnormal (i) Type of abnormality
(ii) Sex
(iii) Age and Name
(5) The most important question asked was about the relation of parents-whether consanguineous or non-consnaguineous.

The parents of such children were interviewed in their houses and school premises and they were very co-operative in providing all the necessary details. Whenever possible with the kind permission of the parents, the photograph of the children was taken.

OBSERVATIONS

Eighty (80) families was studied out of which thirty (30) were consanguineous with a total number of sixty (60) children. Fifty (50) families were non-consanguineous with one hundred and thirty four (134) children.

The result of the observations is as follows :

Summed-up data of consanguineous families

Sl. No. of families	Total Children	Abnormal	Normal
C1	4	1	3
C2	2	1	1
C3	2	1	1
C4	2	1	1
C5	2	1	1
C6	1	1	—
C7	2	—	2
C8	3	—	3
C9	2	—	2
C10	3	—	3
C11	—	2	
C12	1	—	1
C13	2	—	2
C14	2	1	1
C15	1	1	—
C16	1	1	—
C17	1	1	—
C18	2	—	2
C19	1	—	1
C20	2	—	2
C21	3	1	2
C22	2	—	2
C23	2	—	2
C24	4	—	4
C25	2	1	1
C26	2	1	1
C27	1	1	—
C28	2	1	1
C29	2	1	1
C30	2	2	0
Total 30	60	18	42

Abbreviation C for consanguineous marriage.

Sl. No. of families	Total Children	Abnormal	Normal
N1	3	0	3
N2	4	2	2
N3	4	1	3
N4	4	1	3
N5	3	1	2
N6	1	—	1
N7	2	0	2
N8	1	—	1
N9	2	—	2
N10	2	—	2
N11	2	—	2
N12	2	—	2
N13	2	—	2
N14	2	—	2

Abbreviation N for non-consanguineous marriage.

Sl. No. of families	Total Children	Abnormal	Normal
N15	2	0	2
N16	2	1	1
N17	3	1	2
N18	2	1	1
N19	2	0	2
N20	5	2	3
N21	5	2	3
N22	1	1	0
N23	1	1	0
N24	2	2	0
N25	4	2	2
N26	2	1	1
N27	1	1	0
N28	1	1	0
N29	3	1	2
N30	3	1	2
N31	4	1	3
N32	3	1	2
N33	1	1	0
N34	3	1	2
N35	2	1	1
N36	3	1	2
N37	2	1	1
N38	1	1	0
N39	2	1	1
N40	3	1	2
N41	2	1	1
N42	2	0	2
N43	3	1	2
N44	8	8	0
N45	2	2	0
N46	2	1	1
N47	2	1	1
N48	4	1	3
N49	9	1	8
N50	3	1	2
Total 50	134	50	84

RESULT AND DISCUSSION

Out of the Eighty (80) families studied, thirty families were consanguineous and rest fifty families were non-consanguineous.

Following is the comparative study of birth defects among consanguineous and non-consanguineous marriages.

Comparative Study

Consanguineous families

Observation I :

No. of families	=	30
No. of Children	=	60
Abnormal	=	18
Percentage	=	30%

Observation II :

No. of families	=	30
Affected families	=	17
Percentage of affected families	=	56.67%

Non-consancuneous families

Observation I :

No. of families	=	50
Total Children	=	134
Abnormal	=	50
Percentage of Abnormality	=	37.31%

Observation II :

No. of families	=	50
Affected families	=	37
Percentage of affected families	=	74%

CONCLUSION

From the above observations it is quite evident that birth defects are pronounced in consanguineous as well as non-consanguine-

ous marriages, which testifies that consanguineous marriage is not a major factor causing birth defects.

Our observations are in accordance with the observations of Harrod et al. (1984), who evaluated two unrelated infants at 14 and 27 months born to non-consanguineous normal parents. Both the children had severe birth defects. Schinzel and Ltischji (1984), recorded a severely microcephalic, quadripelagic child without extracranial anomalies born to a young non-consanguineous couple. The report of Jaffe et al. in Israel in 1988 also confirms our observation. Buttins et al. in 1989, reported an apparently new MCA-MR syndrome with facial dysmorphism, microcephaly, myopia and Dandy-Walker malformation in three severally mentally ratarded sibling born to normal, non-consanguineous parents. Our observations are further confirmed by the study of Navarrete et al. 1991.

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