

TABLE I PATIENT CHARACTERISTICS OF TWO GROUPS

Variables	IVIG- (controls) <i>n</i> = 13	IVIG+ (cases) <i>n</i> = 12	<i>P</i> value
Age (mo), mean(SD)	12.0 (4.9)	7.3 (5.8)	0.04
Gender (M/F)	6/7	6/6	0.6
Hepatomegaly	12	9	0.3
Cardiomegaly	12	12	0.5
ECG: Low-voltage	12	9	0.3
Initial EF (%), mean(SD)	22.5 (11.1)	17.5 (5.0)	0.17
Inotropes	1.5 (0.9)	3.0 (1.1)	0.001

EF: ejection fraction

from immunoglobulin administration. In Group I, only one patient (8%) expired as compared to 6/13 (46%) in Group II ($P=0.04$). Recovery of left ventricular function was not significantly different between two groups (49% vs. 46%) ($P=0.13$).

Our reports showed that IVIG group had significant higher survival rate (92%) than other group who did not receive IVIG (54%). The therapeutic efficacy of high-dose IVIG in Kawasaki disease has been already established(2). Other experimental animal and human studies in acute myocarditis have also reported better outcome with IVIG(3-6).

Our study had few limitations. The diagnosis was based on clinical features, CXR, ECG, and echocardiography. Small sample size and retrospective nature of the study were the other hinderances. However, this study provides support for aggressive supportive care and early use of IVIG in acute myocarditis in children.

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Statistical Reporting in *Indian Pediatrics*

We analyzed 45 original articles from *Indian Pediatrics* for appropriateness of the statistical methods. Appropriate statistical tests (93%), no use of obscure test and use of exact *P* value were the positive findings observed. Sample size was calculated in 24% and confidence interval in 13%. There is a need to generate awareness regarding confidence interval and sample size calculations.

Key words: *India, Journal, Statistics.*

Statistical errors are common in scientific literature(1-3). We conducted this study to evaluate the appropriateness of statistical techniques used and types of statistical errors present in original papers

published in *Indian Pediatrics*. The journal has separate advisors for biostatistics(4).

All the authors independently surveyed 45 *Lead Articles* and *Research Papers* published in *Indian Pediatrics* in 2007 and 2008 on the basis of a modified checklist(5). The results are summarized in **Table I**.

Appropriate statistical tests were used in 42 (93%) articles. In few studies parametric test were used in place of nonparametric tests. Mainly these data were dealing with rank and scores. The incidence of inappropriate tests is less as compared to other studies published in this area(2,3,6). Sample size was calculated in only 11 studies; among the clinical trials it was calculated in 46% of studies. Data were checked for normal distribution in only 21% studies. Multiple hypothesis testing was done in most of the articles. Separate test was used for each variable. Another neglected aspect was confidence interval, calculated in only 13% articles. Confidence interval gives us range of the value around the effect size of sample where population mean actually lies. Other encouraging point is mentioning of exact *P* value in most of the articles.

We observed that as compared to previous studies in other journals, the statistical reporting of *Indian Pediatrics* is better(6,7). Editors should generate more awareness regarding confidence interval, distribution of data, nonparametric statistics and calculation of sample size.

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TABLE I REPORTING OF STATISTICAL METHODS IN INDIAN PEDIATRICS

Checklist points	Frequency(%) <i>n</i> =45
Sample size calculation	11 (24.4)
Baseline comparison	43 (95.5)
Ratio + nominal data	22 (48)
Nominal data	11 (24)
Ratio data	9 (20)
Ordinal	2 (4)
Ratio + ordinal	1 (2)
Appropriate statistical test	42 (93)
Parametric test	38 (84)
Nonparametric test	7 (15)
Normal distribution analyzed	7 (15)
Obscure test	0
Post hoc subgroup analysis	0
Two tailed test	45 (100)
Outliers	0
Correlation	9 (20)
<i>r</i> value	7 (15)
<i>P</i> value <0.05	45 (100)
Confidence interval	6 (13)
Relative risk reduction	0
Absolute risk reduction	0
Number needed to treat	0
Use of software	31 (29)

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