Prescribing Practices of Doctors in Management of Acute Diarrhea

We conducted this study to determine the prescribing practices of doctors in management of acute diarrhea in children in the age group of 6 month -5 year. Antimotility agents and low/zero lactose formula was prescibed in 9.8% and 24.7% cases, respectively by general practitioners.In about 66.6% and 5.7% cases pre/probiotics were prescribed and oral rehydration salt (ORS) were not prescribed by the pediatricians.

Key words: *Diarrhea, India, management, Practices.*

Diarrhea is a leading cause of mortality and morbidity in children, especially in the developing countries, and 19% of the child deaths are attributable to diarrhea [1]. The Sample Registration Survey reported that about 10 per cent of infants and 14 per cent of 0-4-year children die due to diarrhea in India [2]. Most of the childhood acute diarrhea are caused by viral infections and are self limiting in nature, hence antibiotics should be used in selective cases [3]. The Indian Academy of Pediatrics recommends use of oral rehydration salt solution (ORS) in all type of diarrhea along with oral zinc. There is insufficient evidence to recommend probiotics, antimotility and antisecretory drugs like racecadrotil, which may even be harmful [4-6].

600 children (6 month-5year old) suffering from acute diarrhea without dysentery, severe malnutrition or any systemic illness, attending Pediatric outpatient department of our institute between October 2009 to September 2010 were selected. Out of 600, 480 had consulted at least once for this episode of diarrhea. Out of these 480, 92 had visited unquali-fied practioners so they were excluded from the study. Out of remaining 388; 214 and 174 had consulted a general practitioner (GP) (having MBBS degree), and Pediatrician (having MD, DCH, DNB degree), respectively.

Prescribing rate of antibiotics was as high as 88.7% and 74.7% among GPs and Pediatricians respectively. Some even used injectible antibiotics. Co-trimoxzole and metronidazole were the preferred choices. Pediatricians also prescribed pre/probiotics in 66.6% of cases. 9.8% of GPs prescribed antimotility agents. No ORS was prescribed in 13.1% and 5.7% of patients by GPs and pediatricians, respectively. Oral zinc was prescribed in about 50% cases. The results are summarized in ***Table* I.**

In a UNICEF survey of 10 Indian districts, not more than 47% of prescriptions for diarrhea included ORS while "tonics", anti-diarrheal drugs and injections continued to be prescribed in the same proportion as for ORS. The survey documented less than 1% prescriptions for zinc [7]. A retrospective study in tertiary care hospital of Chennai, India showed that use of antimicrobials and zinc was 41.8% and 65%, respectively. The use of zinc had increased to 75% over a three year period. This was accompanied by a decline in the use of antibiotics to below

TABLE I PATTERN OF DRUG PRESCRIPTION BY DOCTORS IN DIARRHEA

Drug	Pediatricians (*n*=174)	General physicians (*n*=214)	Total (*n*=388)
Antibiotics	130 (74.7%)	190 (88.7%)	320 (82.5%)
Oral	128 (73.5%)	180 (84%)	308 (79.4%)
Pro/prebiotics	116 (66.6%)	103 (48.1%)	219 (56.4%)
Antiemetics	63 (36.2%)	104 (48.6%)	167 (43%)
Antisecretory agents	39 (22.4%)	49 (22%)	88 (22.7%)
Antimotility agents	01 (0.5%)	21 (9.8%)	22 (5.7%)
Low/zero lactose formula	26 (14.9%)	53 (24.7%)	80 (20.6%)
No ORS	10 (5.7%)	28 (13.1%)	38 (9.8%)
Oral Zinc	103 (59.1%)	89 (41.5%)	192 (49.5%)

30% [8]. A recent hospital based cross-sectional quantitative study from Ujjain, India, depicted that ORS, antimicrobials, probiotics and racecadrotil was used in 58%, 71%, 68% and 19% of cases, respectively [9], in present study it was 90.2%, 82.5%, 56.4% and 22.7%, respectively.

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Trend of Antibiotic Resistance in Children with First Acute Pyelonephritis

There have been many recent reports of increasing antimicrobial resistance among uropathogens. In this study, we reviewed medical records of children (<18 yr age) with first acute pyelonephritis admitted to our Institution between January 2005 to December 2009. 411 children (189 girls) were studied and increasing trend in bacterial resistance toward co-trimoxazole, 2nd and 3rd generation cephalosporins and gentamicin were observed.

Key words: Antibiotic, Child, Pyelonephritis, Resistance, Serbia.

Prompt treatment of childhood acute pyelonephritis is likely to reduce the risk of permanent renal scarring [1]. Increased antimicrobial resistance, especially the resistance against broad-spectrum beta-lactams (ESBL) uropathogens has jeopardized the antibiotic treatment of UTI in children [2]. The aim of this study was to assess the changing trend of local resistance patterns of urinary pathogens to commonly used anti-microbial agents in Serbia during the last 5 years in children with acute pyelonephritis.

Medical records from January 2005 to December 2009 of all children aged less than 18 years of age admitted to the Nephrology or Pediatrics Department at the University Children's Hospital in Belgrade for their first acute pyelonephritis were reviewed (*n*=411; 189 girls; median age 4 mo; range 0.1-112 mo). Two different periods, early (from January 2005 to December 2007) and late (from January 2008 to December 2009), were studied. The following antimicrobial agents were tested: ampicillin (AMP), a combination of sulphametho-xazole and trimethoprim (TMP-SMZ), cephalexin, ceftriaxone, cefotaxime, ceftazidime, gentamycin, amikacin and ciprofloxacin. Multi-drug resistance was defined when resistance to at least three different groups of antibiotics was apparent.

When early and late study periods were compared increasing trends in bacterial resistance patterns were observed towards TMP-SMX, 2nd and 3rd generation cephalosporins and gentamicin as well as in multidrug resistance, while a decreasing trend was seen towards amikacin and unchanged towards ciprofloxacin (***Table* I**). The majority of ESBL (+) *E. coli* strains were multi-resistant (56.5 % in early and 66.23% in late period), while only 3.4% and 5.6% of ESBL (-) strains, respectively.

In poor and underdeveloped countries, overall prevalence of antimicrobial resistance is notably high, reflecting irrational and inordinate use of anti-microbial

TABLE I CLINICAL CHARACTERISTICS IN THE TWO STUDY PERIODS

	2005-2007 (*n*=136)	2008-2009 (*n*=275)
Gender , M/F (%)	51.5/48.5	55.3/44.7
Age (months)	3 (0.5-9.0)	4.5 (1.0-7.5)
ESBL (+) UTI (%)	23.5	63.6
Abnormal renal US (%)	37.4	26.7
VUR (%)	31.7 (63)	29 (158)
Urinary pathogens (%)		
E.coli	82.3	88.0
Klebsiella	6.1	7.3
Enterococcus	3.7	2.5
In vitro resistance (%)		
Ampicillin	85.8	98.0
TMP-SMZ*	38.5	59.2
Cephalexin*	30.8	69.3
Cephrtiaxone*	34.0	67.0
Cefotaxime*	26.5	65.0
Ceftazidime*	42.6	62.7
Gentamicin*	33.1	56.3
Amikacin$	17.9	8.5
Ciprofloxacin	0.9	0.9
Multidrug resistance#	16.9	44.7

*US, Ultrasound; TMP-SMZ co-trimoxazoles, VUR, vesicoureteral reflux; ESBL (+) UTI, Urinary tract infections caused by ESBL-producing microorganisms; 2005-2007 vs 2008-2009 Pratice: * <0.001; # <0.01; $ <0.05.*

agents [3]. We observed about 50% resistance towards TMP/SMX in this study, similar to that reported in Turkey [4], Greece [5], England [6], Belgium [7] and Taiwan [3], but less common than in Cambodia [8], Central African Republic [9] and Pakistan [10]. Thus, the use of TMP-SMZ as a single agent for empiric treatment of pediatric UTI would not cover half of the uropathogens. We also found increased resistance towards gentamicin, while amikacin remained suitable for empiric treatment of acute pyelonephritis. In general, we observed the striking increasing trend for ESBL (+) and for multi-drug-resistant uropathogens during the late study period compared to the early period. The increased uropathogen resistance trend demonstrated by our study could be linked to non-restricted use of antibiotics in Serbia by physicians as well as to high degree of self-medication in the population.

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Trends of Childhood Vasculitides in Eastern India

A prospective follow up for 7 years (2004-2010) revealed 10.2% children (*n*=158) had vasculitis among all rheumatological cases (*n*=1544). Henoch-Schonlein Purpura (HSP) (56.9%) and Kawasaki disease (KD) (24%) were major groups.

Key words: *Childhood vasculitides, India.*

We, at our pediatric rheumatology clinic, IPGMER, Kolkata, diagnosed and prospectively followed up children with different types of vasculitis for a period of 7 years from 2004 to 2010. The objective was to delineate the clinical spectrum of childhood vasculitis from Eastern India and to explore the differences in disease pattern from that already reported. Out of total 1544 rheumatological cases under12 years, 158 children had some form of vasculitis according to American College of Rheumatology (ACR) and Chappell Hill Consensus Criteria (CHCC).Nineteen cases were lost to follow-up. Admission was required for 106 patients and 54 had serious illness. Nine patients died. Primary vasculitides were diagnosed in 135 patients. Male: female ratio was 1.9:1 and the mean age of onset was 5.5 years. Kawasaki disease and Henoch-schonlein purpura was diagnosed in 38 (24%) and 90 (56.9%) cases, respectively. Other vasculitides included Polyarteritis nodosa (*n*=4), Wegener's granulomatosis (*n*=2), and Takayasu disease (*n*=1). Secondary vasculitis accounted for 23 cases. HSP remains the most frequent vasculitis in our study, as also seen in other studies [1,2]. Sixteen of them (18%) had major organ involvement and 7 (7.77%) had gastro-intestinal affection. Nine patients had isolated renal involvement. Among the 38 cases of KD, 20 had coronary artery involvement, 5 had persistent aneurysms, 29 received IVIG, none required angioplasty, and the mortality was nil. One had incomplete KD, and atypical presentation with renal failure was found in one.

Large studies with uniform comprehensive data are not available from Asia. Indian data that included adult population is not a true representation of pediatric vasculitides from all over the country [4]. Our report is an attempt to document etiology of vasculitides in Eastern part of India.

Contributors: RM, SS and MN were involved in concept of the study and data acquisition and analysis. SS, RM drafted the article and searched the literature. RM and AG did the critical review. All the authors approved the final manuscript. RM will act as guarantor.
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TABLE I SPECTRUM OF VASCULITIS – COMPARATIVE DATA IN DIFFERENT SERIES

Vasculitis Types	Czeck series [4] (*n*=452) cases (%)	Canadian series [2] (*n*=225) cases (%)	US series [3] (*n*=434) cases (%)	Indian data [9] (*n*=1064) cases (%)	Present series (*n*=158) cases (%)
KD	23 (5.08)	147 (65.3)	97 (22.4)	5 (0.46)	38 (24.0)
HSP	410 (89.51)	38 (16.9)	213 (49.1)	232 (21.8)	90 (56.9)
WG	1 (.002)	5 (2.2)	6 (1.4)	147 (13.8)	2 (1.26)
PAN	1 (.002)	4 (1.8)	14 (3.2)	94 (8.8)	4 (2.53)
TD	1 (.002)	2 (0.9)	8 (1.8)	215 (20.2)	1 (0.63)
Behcet's	–	2 (0.9)	–	145 (13.6)	–
Miscl	16 (3.53)	27 (12)	96 (22.1)	226 (10.36)	23 (14.55)

KD: Kawasaki disease; HSP: Henoch-Schonlein purpiura; WG-Werner's granulomatosis: PAN-Polyarteritis nodosa; TD-Takayasu disease.

Adiponectin and Pro-inflammatory Cytokines in Obese Diabetic Boys

Adiponectin serum levels were significantly lower in obese diabetic than in non-obese healthy boys ($P<0.001$). Circulating soluble E-selectin levels was significantly higher in obese diabetic boys than the healthy non-obese ($P<0.01$). There were significant inverse correlations between adiponectin and sE-selectin, hsCRP, IL-1β, and MCP-1 and positively with NO^x. We conclude that sE-selectin and MCP-1 may represent a link between obesity and related co-morbidities in children and adults.

Key words: *Adiponectin, Children, Egypt, Inflammation, Obesity, sE-selectin, Type 2 Diabetes.*

We conducted this study to investigate circulating levels of pro-inflammatory cytokines (hsCRP, IL-1β, and MCP-1) in children and the influence of obesity in early life on adulthood as well as the correlation to markers of glucose metabolism (adiponectin) and endothelial damage (NO and sE-selectin).

Twenty boys (age 10-13 years) were included in this study, 10 of which were healthy non-obese controls (Group I). The other 10 were obese boys with newly diagnosed type 2 diabetes mellitus (T2DM) (Group II) and not receiving insulin. They were compared to 20 male adults with normal glucose metabolism with mean age

TABLE I CLINICAL AND HEMODYNAMIC CHARACTERISTICS OF SUBJECTS

	Adults		Boys		*P value*
	Group I (*n*=20) Normal glucose metabolism	Group II (*n*=50) Impaired glucose metabolism	Group III (*n*=10) Control	Group IV (*n*=10) Diabetic	
Age (years)	38.5 ± 3.7	42.2 ± 2.8[a]	11.4 ± 1	11 ± 1	NS
BMI (kg/m^2)	31 ± 1.2	32.1 ± 1.4	24 ± 1	28.5 ± 1	NS
DM Duration (years)	—	3.3 ± 1	—	2.7 ± 1	—
CVD (MI/-)	—	25/-	—	—	—
FBG (mg/dL)	102.6 ± 3.1	208.2 ± 89[a]	106 ± 5.1	256 ± 7[b]	-0.05
HbA_{1c}%	4.5 ± 0.6	9.6 ± 4.3[a]	4.2 ± 0.7	12.6 ± 0.7[b]	0.05
TAG (mg/dL)	115.7 ± 25	280 ± 21[a]	97.4 ± 7.45	222 ± 10[b]	0.05
TC (mg/dL)	176 ± 16	305.4 ± 44.45[a]	136.4 ± 11.2	250 ± 4.5[b]	0.05
HDL-C (mg/dL)	39 ± 1.6	26 ± 2.3[a]	40.3 ± 1.3	39 ± 1.8[b]	0.05
LDL-C (mg/dL)	115.5 ± 20	266 ± 22.3[a]	108 ± 14.3	227.2 ± 9[b]	0.05
MDA (nmol/mL)	2.9 ± 0.7	5 ± 1.8[a]	2.6 ± 0.45	4.8 ± 0.4[b]	0.05
hsCRP (mg/L)	1.7 ± 0.4	34.8 ± 12.7[a]	0.21 ± 0.12	3.8 ± 1.9[b]	0.05
Insulin (uIU/mL)	8 ± 1.3	105.2 ± 13.7[a]	12 ± 1	58 ± 8.2[b]	0.05
HOMA-IR	2 ± 1.47	73 ± 11.6[a]	3 ± 0.3	36.6 ± 5.6[b]	0.05
NO^x (Umol/L)	39.9 ± 7.9	5.9 ± 1.3[a]	37.6 ± 6.3	8.7 ± 1.2[b]	0.05
IL-1β (pg/mL)	20 ± 1.7	28.4 ± 2.3[a]	21 ± 1.3	28 ± 1.4[b]	NS
sE-selectin (ng/mL)	22.3 ± 5	37.8 ± 5[a]	30 ± 2.5	31 ± 2.9	0.05
Adiponectin(pg/mL)	732.4 ± 142.4	266 ± 47.2[a]	597 ± 75.4	282.5 ± 61[b]	0.05
MCP-1 (ng/mL)	110.5 ± 7.4	137.2 ± 16[a]	104.5 ± 3.6	218 ± 32[b]	0.05

Data is given as mean ± S.D; BMI: body mass index; FBG: Fasting blood glucose, HbA_{1c}%: glycated hemoglobin, TAG: triacylglyceriol, TC: total cholesterol, HDL: high density lipoprotein, LDL: low density lipoprotein, MDA: malondialdehyde, hsCRP: high sensitivity C-reative protein, HOMA-IR: homeostasis model of assessment-insulin resistance, NO^x: nitric oxide metabolites, NS: not significant a,b significant difference from control adult and control boys, respectively; P values are for the comparison between the control and the study groups at significance level ≥0.05.

38.5 ± 3.7 years and BMI 31 ± 1.2 kg/m^2. Fifty male obese adults with impaired glucose metabolism were also recruited for comparison (mean age 42.2 ± 2.8 years). ***Table* I** compares the recruited boys and adults for various biochemical markers. Fasting blood sugar, lipids, insulin, insulin resistance (IR) as HOMA-IR, HDL-C, NO^x, and adiponectin differed significantly between cases and controls, both for the boys and adults.

Correlation of either adiponetin or sE-selectin with selected anthropometric, biochemical, and clinical parameters in the studied groups was negative and positive, respectively, for boys in the case as well as in the control groups. Negative correlation between adiponectin and BMI demonstrated in our study, has been observed previously [1]. Since, NO inhibits leukocyte adhesion and rolling as well as cytokine-induced expression of MCP-1, its level correlated negatively with hyperglycemia, dyslipidemia, and inflam-mation. The abundance of MCP-1 in blood is increased in obese subjects, suggesting that MCP-1 might be an adipokine whose expression is increased in obesity [2].

Our results demonstrated an elevated level of MCP-1 and sE-selectin in newly diagnosed T2DM obese boys, where both are considered as amplifiers of the inflammatory cascade, and moreover, both showed an inverse correlation with adiponectin. Winer, *et al*. [3] reported that adiponectin may function as a biomarker of the metabolic syndrome (MetS) in childhood obesity because of its strong correlation with several indices of IR. Similarly, Gilardini, *et al*. [4] reported that hypoadiponectinemia may be associated with a high risk for the MetS. Another explanation was provided by Rosa, *et al*. [5] who reported that infiltration of inflammatory cells may represent the critical step in adipose tissue-associated inflammation, although the initial trigger(s) for accumulation of these cells remains elusive. The present study extends the existing knowledge about alterations in the pro-inflammatory cytokines family in obese adults to obese children. It also supports the widely accepted theory that low adiponectin levels promote the production of adhesion molecule(s) (namely sE-selectin) in ECs [6].

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Gram Stain as a Predictor of Urinary Infections in Children under 2 years

During early life, clinical manifestations of urinary tract infection (UTI) are nonspecific and definitive diagnosis through urine culture is often late. It is essential to have rapid and reliable diagnostic tests to guide initial treatment. We compared the diagnostic effectiveness of the urine dipstick, urine sediment, and Gram stain in infants with suspected UTI.

This was a retrospective study conducted by reviewing medical records of patients admitted to the pediatric emergency service during the past five years. We included patients aged up to 24 months with symptoms suggestive of UTI, in which a urine sample was obtained by bladder catheterization to perform urine dipstick, urine sediment, gram stain and urine culture. The presence of leukocyte esterase and nitrites of 1+ or greater by dipstick were considered positive. Leukocyturia was defined as >10 leukocytes per high power field in centrifuged urine; and

bacteriuria as the microscopic visualization of any number of bacteria. Gram stain positivity was defined as the isolation of more than 1 bacteria per high power field of any organism in centrifuged fresh urine. The results of these tests were compared with the urine culture as gold standard (positive if >10,000 cfu/mL of a single pathogen). We determined the sensitivity, specificity, positive and negative predictive value, for each of the parameters analyzed. We also compared the results of Gram stain by stratifying patients according to age group (≤3 months and >3 months).

During the 5-year study period, 980 patients met inclusion criteria; 430 were girls and mean age was 6 months. Urine culture was positive in 558 cases. Urine dipstick showed leukocyte esterase to be the most sensitive parameter, although nitrites were the most specific (***Table* I**). Similar values were found for the presence of leukocytes and bacteria in the urinary sediment. Gram stain showed the highest diagnostic effectiveness. There were no differences of the value of gram stain in those below and above 3 months of age.

Screening tests are essential to guide diagnosis and initial treatment of UTI in children until the results of urine cultures become available [1,2]. Urine dipstick has been reported to have lower sensitivity in incontinent children, as decreased nitrite production and a less intense inflammatory response due to more frequent urination [3]. This is confirmed in our series. While urine dipstick is a fast and affordable method for initial diagnosis in the emergency department [4], its sensitivity was 80%. Similarly the diagnostic utility of urine sediment was also limited. In contrast, gram stain provided a higher sensitivity and specificity applicable not only to children under 3 months but extendable to 24 months, and was thus a reliable guide for initial antibiotic treatment [5].

Our results show that gram stain was the diagnostic tests of choice for decision making in infants with suspected UTI until the results of urine culture are available.

TABLE I UTILITY OF SCREENING TESTS FOR DIAGNOSIS OF URINARY TRACT INFECTION

	S (%)	Sp (%)	PPV (%)	NPV (%)
Urine dipstick				
Leukocyte esterase	76	84	86	73
Nitrites	31	99	97	53
Leukocyte esterase and Nitritess	26	99	42	51
Normal	80	83	86	77
Urine sediment				
Leukocyturia	75	84	86	72
Bacteriuria	42	71	94	56
Leukocyturia and bacteriuria	38	98	96	55
Normal	79	83	85	75
Gram stain	83	97	97	82

S: sensitivity; Sp: Specificity; PPV: Positive predictive value; NPV: Negative predictive value.

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Fate of Award Winning Papers at Annual Conference of Indian Academy of Pediatrics: a 13 years' Experience

The present study was conducted to determine the rate of publication of research papers winning awards at the annual pediatric conference of Indian Academy of Pediatrics. Secondary objective was to identify the factors facilitating their publication, if any. Overall, 75 papers were awarded between 1995 and 2007; of these, 28 (37%) were subsequently published till January 2011. Papers originating from North India, medical colleges, and those with an experimental design had higher chances of subsequent publication.

Key words: Award papers, Biomed journals, PEDICON, Pediatrics, Publication.

Indian Academy of Pediatrics (IAP) is a prestigious national body in pediatric subspecialty in India. The annual conference of IAP "PEDICON" is a popular and esteemed event. Scientific research from India and other countries is presented. A maximum of 6 papers are awarded each year. There are 4 prestigious award categories in oral paper presentations with 2 awards each in VB Raju (Child Health) and James Flett (Social Pediatrics) category and 1 each in SS Manchanda (neonatology) and ST Achar (Pediatrics) award category. The best papers with high quality of scientific research are selected for these prestigious awards by an eminent panel of judges after complex scoring system. Thus, winning this prestigious award implies high quality, research work. However, it is not known whether these papers are submitted for publication or if submitted finally clear the peer review procedure in an indexed journal to achieve wider dissemination and recognition. We studied the publication rates of award winning papers at PEDICON from 1995-2007. Secondary objective was to ascertain the factors that facilitated subsequent publication.

The abstract papers chosen for presentation in the award winning category were obtained from the proceeding book of the PEDICON (national conference) from 1995-2007. The year 2007 was chosen to allow sufficient time for the presented papers to reach publication. The published papers were retrieved by exhaustive computerized search by PubMed, Ind Med and Google server as of January 2011. Appropriate key words from the title combined with each author's name were used to identify the corresponding publication. If a hit was not obtained, the process was repeated with each author's name. Individual efforts were also made to contact all the awardees (whose papers could not be traced in the published domain) by email and postal mail.

Data were recorded including award category, sex of awardees, geographical area of origin (as per 5 IAP zones), organization of origin (medical college or other), design of the study (descriptive or experimental). Zonal or institutional predominance in any award category was noted. The published papers were also analyzed for type of journal and time lag of publication.

A total of 75 papers received awards in past 13 years; and of these 28 (37%) papers were eventually published. Detailed distribution of published papers and its correlation with various factors is detailed in ***Table* 1**. The papers were published mostly in indexed Indian journals (*Indian*

TABLE I FACTORS FACILITATING PUBLICATION OF AWARD WINNING PAPERS AT PEDICON BETWEEN 1995-2007

	Papers Awarded (n=75)	Papers Published (n=28)	P Value
Award Category			
James Flett	27(36%)*	10(37 %)	0.74
VB Raju	26(34.7%)	8(30.8%)	
ST Achar	13(17.3%)	6(46.2%)	
SS Manchanda	9(12%)*	4(44.4%)	
Zonal Distribution			
North	35(46.7%)	20(57.1%)	0.004
South	5(6.7%)	–	
West	20(26.7%)	7(35%)	
Central	14(18.7%)	1(7.1%)	
East	1(1.3%)	–	
Sex of the Presenter			
Male	47(62.7%)	15(31.9%)	0.46
Female	28(37.3%)	13(46.4%)	
Institute of Origin			
Medical College	54(72%)	26(48.1 %)	0.003
Others	21(28%)	2(9.5%)	
Study Design			
Descriptive	62(82.7%)	20(32.2 %)	0.04
Experimental	13(17.3%)	8(61.5%)	

**SS Manchanda was not awarded for 4 years and James Flett was awarded to 3 papers in the years 2006.*

Pediatr-19, *Indian J Pediatr*-5) and 4 in international journals (*Breastfeeding J, Asian J Pediatr, Eur J Child Neurol and Hum Vaccin*). The time from presentation to publication for 28 papers ranged from 2 to 77 months (average 23.4 ± 11.79 months); the majority (20/28) were published in the first two years of presentation. Higher number (46%,16/35) of the papers presented before the year 2000 were published as compared to those papers presented after 2000 (30%,12/40).

There is growing pressure in the academia for publication. Granting of awards and constructive criticism of the best papers presented at meetings may also increase the chances of publication. Previous publications on the rate of full paper peer reviewed publications originating from abstracts presented at professional medical meetings, describe rates ranging from 35 to 65% [1-3]. However, whether award winning presentations have higher chances of subsequent publication is unreported. The only study comparing the publication rate of award papers selected at Undergraduate Medical Congress of ABC Foundation School of Medicine, Brazil, documented a publication rate of 47.9% (*n*=71) [4]. Lack of subsequent interest/ guidance for preparing the written manuscript as per the journal style and format were also cited as reasons for not getting the publication. Thus, winning an award does not, on its own, appear to be a strong motivation/reason to ensure subsequent publication in a peer reviewed journal. The degree of motivation to publish the paper appears to be the maximum in a medical college setting.

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