

Research Article

Hiccup- A Clinical Analysis Study

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Abstract: Hiccups are repeated involuntary spasm of diaphragm followed by sudden rush of air in to the lung causing closure of the glottis which chokes the inflow of further air and produce the characteristic sound, Because of its commonest occurrence and sometime lead to disturbing condition and annoyance. The present study was undertaken to clinically analyse them and treat accordingly. The materials and methods in this study was 95 cases (age varying 8-68yr Mean±SD = 44.5±9.8yrs M; F 1:16:1) who were attending the clinic mainly for Hiccup were included in this study. They were subjected to routine examination of blood, urine, stool, and X-ray/Screening chest PA view and where ever needed they were subjected to blood chemistry for hepatic, renal function test, electrolyte, blood sugar ultrasonography of abdomen and CT scan. The observation was Most of them were from 3rd (27.3%) 4th (21.11%) and 5th (26.4%) decades Females were mostly from 3rd decades of life (17 out of 26 cases or 65.3%) otherwise males predominated the series clinically presented as – (i) Benign transient self limiting with avoidable factors(50cases), (ii)Benign self limiting form and often of duration more than one hours and occasionally with other associated factors.[26 cases] and (iii) Persistent untreatable from [19cases] with prolong duration and associated with disturbing element and organic cause [8cases]. Predisposing factor were mostly spicy chilly food (28 cases) carbonated beverage (25cases) and emotional factor (2cases). Most common associated symptom observe, were gastric distension flatulence, dyspepsia and altered bowel habit (25cases), conversion reaction (14cases) and hysterical (10caese). Organic causes were seen in 8 cases which were fatal with 2 deaths in cases of obstructive Jaundice with hepatic malignancy; Moderate anaemia was seen in 30 cases with leucocytosis in 12 cases. Renal functions were altered in 5 cases and 5 cases were diabetics (hyperglycemia). All of them responded well to home remedies and pranayam yogas. Few of them of moderate severity (26cases) and severe cases (19cases) responded to it pride, Antacid, sedation and antidepressant. Prognosis was good and few children develop stamring who needed speech therapy. In conclusion Hiccups are most common disorder and every person has experienced at some time of life, Hiccups are most benign self limiting and transient with predisposing factor. Female were mostly suffer from hysteria which responded to psychotherapy. Organic causes will lead to severe Hiccup; which is distressing and disturbing and occasionally lead to fatality.

Keywords: Hiccup, Benign self limiting, persistent intractable, gastric distension conversion reaction

INTRODUCTION:

Hiccups (Hiccup Singultus) is a repeated involuntary spasm of diaphragm followed by sudden rush of air in to the lung causing closure of glottis which chokes the inflow of further air and produce the characteristic sound [1]. It is a benign condition, very common and all ages even including the foetus, nobody spares and everyone has experienced the Hiccup in their life at sometimes or other. Persistent Hiccups are uncommon and which occur reads to all awkward position of the person in society.

Females develop Hiccup more frequently during early childhood or young age than males of the

same age. Some studies revelled predominance of males and at time of organic etiology. In view of its common occurrence and at a time difficult to manage. The present study is under taken to evaluate it clinically for suitable and prompt management.

MATERIAL AND METHOD:

Those patient who came mainly for Hiccups, were included in this study during the period of two years. They were thoroughly interrogated and physically examined and asked for predisposing factor, duration and how many times especially regarding persistence of the Hiccup was there with any associated symptoms. They were subjected to routine laboratory

investigation of blood urine and stool. In case who were having Hiccup of longer duration and with no obvious cause were submitted to estimation of sugar, electrolyte, BUN, Serum creatinine, X-ray/screening chest PA view liver function test , serum enzyme and ECG. In occasional stances as per need, they were submitted to upper GI Endoscopy, Barium swallow, ultrasonography abdomen, MRI of brain and CT-Scan of chest.

OBSERVATION AND RESULT:

Ninety-five patients (Table-1) whose age varied from 8-68 yrs (44.5±9.8yrs) with sex ratio of M:F=1.6:1 attended the OPD mainly for Hiccups during the two years' time. Main age group involved was 3rd (27.3%) 4th (21.1%) and 5th (26.4%) decade of life, female 17 cases or 65.4% were of 3rd decades of life, and outnumbered the male(9cases) while in other age group male predominate the series.

Seventy-six (79.9%) (Table-2), where having Hiccups of benign self limiting and 50 (51.62) of them had mild Hiccup of transient. Persistent and mainly having predisposing factor while (27.3%)of moderate with a little longer duration but always less than one hours, 20% of them had severe intractable Hiccup with prolong duration more than one hour and they were mostly above 40 year of age(25 cases or 26.3%) with associated same cause hindering the normal life, 93.7% of them have some predisposing factor in which common ones were chilly spicy food (29.5 %) and carbonated drinks (26.4%), 21.8 % have emotional stress and excitement etc.

Amongst associated symptoms (66.3%) commonest was gastric distress flatulence and dyspepsia (26.4%) 42.2% has psychosomatic disorder, commonest were conversion reaction (14.7%) and hysterical (10.5%) in females. Organic disorders were seen in 8 cases (8.5%) mainly above 50 yrs of age. They were obstructive jaundice with malignancy (2.1%) liver abscess (1.05%) cerebro vascular accident (lacunar infarct 1 case) and inferior IHD (1case).

Laboratory investigation (table-3) revealed mild (33.7%) to moderate degree (10.5%) anaemia's. Five cases (5.3 %) were diabetic as per WHO criteria having raised fasting and post prandial blood sugar normocytic hypo dynamic nature. 3 Cases had clinical features of renal failure (oliguria 2 cases, anuria 1 cases), ultrasonography (6 cases) revealed obstructive jaundice (2 malignancy 2 cases liver disease and alteration in kidney echotexture size. (3 cases) one cases of cerebrovascular accident and seen revealed lacunars infarct with other cases. Ischemic heart disease on ECG findings suggestive of postero inferior infarct Mild Cases (50 cases) responded well with home remedies and avoiding predisposing factor like spicy chilly food (20 cases) alcohol consumption (10 cases), and excitement (10 cases). They were asked to do Pranayam (kapalbhati and anulom vilom, Bharsheka along with yogasanayas). Ten of them needed antidepressant amitriptyline 10mg BD.

Moderate cases (26 cases) also responded to home remedies, in addition 15 of them were also give hypnosis and psycho therapy and two of them acupuncture. Five diabetics responded to therapy as soon as they become euglycemic.

Severe cases (19 cases) were given home remedies with pharmacological therapies eight causes who have organic cases responded to respective therapy along with home remedies liver abscess (1 case) responded as soon as their abscess was drained. Two of them having obstructive jaundice (malignencies) expired to due to metastasis and had hiccup till last. Rest of them (6 cases) responded well to chlorpromazine and amitriptyline. Two females age 35 to 42 years were having psychogenic origin and needed anti epileptic (valporic acid 500 daily] as there Hiccup occurred in series for 5 to10 minutes.

None of them needed invasive therapy like blocking of phrenic nerves and anesthesia. Two children of age 6 years and 8 years developed speech disorder (staemering) who could not be followed but asked to consult Psychiatrist and speech therapy.

Table 1: Age and Sex Distribution (n=95)

Age Group (in Yrs)	Males	Females	Total	%
Upto 10	2	2	4	4.2
11-20	2	8	10	10.5
21-30	9	17	26	27.3
31- 40	13	7	20	21.1
41- 50	17	8	25	26.4
51- 60	5	1	6	6.3
Above 60	3	1	4	4.2
Total	51 (53.7%)	44 (46.3%)	95	100
Age range	8 – 68	16 -62	8 – 68	
Age Mean±SD	42.5±9.2	28.6±6.8	44.5±9.8	
Sex Ratio	1.16	1		

Table 2: Clinical Manifestations (n=95)

	No. of Cases (n=95)	%
1-Hiccups		
Benign and can be averted by as acting Predisposing factor transient	50	52.6
• Benign self limiting with duration often more than one hour and no associated feature	26	27.3%
Persistent untreatable hiccups not self limiting with prolong duration more than one hour assisted with some cause and disturbing element.	19	20%
2-Predisposing Factor	89	93.7%
• Spicy and chilly foods	28	29.5%
• Alcohol consumption	16	17.1%
• Carbonated Beverages	25	26.4%
• Sudden excitue and emotional stress	20	21.1%
3-Associated Symptoms	63	66.3%
• Jerky movement of shoulder	10	10.5%
• Sudden abdominal wall contraction or movement	8	8.5%
• Whole body tremors		
• Sudden momentary pain in throat , chest or abdomen	12	12.6%
• Gastric distention and flatulence dyspepsia[GERD]	25	26.4%
4-Psychological disorders	40	42.2%
• Personality disorder	8	8.5%
• Conversion Reaction	14	14.7%
• Hysterical	10	10.5%
• Sudden shock and griet reaction	8	8.5%
5-Organic Disorder	8	8.5%
• Hepatobiliary		
Liver abscess	1	1.05
Obstructive jaundice	2	2.16
• Renal		
Ac renal failure	1	
Chronic leading to acute exacerbation of renal failure	2	2.1%
Cerebro vascular accidental (infarct)	1	1.05%
Cardiovascular (inf IHD)	1	1.05%

Tablet 3: Laboratory Findings. (n=95)

Lab Findings	No. of cases	%
Hemoglobin in Hb %		
10 – 12%	32	33.77%
8 – 10 %	10	10.5%
TLC 9000 - 12000/cmm	12	12.6%
Serum bilirubin		
2 – 5 mg%	3	3.2%
5 -12 mg%	2	2.1%
S. creatinine		
2 - 8 %	5	5.3%
Bl Urea		
80 - 120mg	3	3.2%
Olig urea	1	1.05%
Anuria	1	1.05%
Blood Sugar		
Fasting >130mg/dl	6	6.3%
PP >180mg/dl	5	5.3%

DISCUSSION:

Hiccup is repeated involuntary spasm of diaphragm followed by sudden rush of air into the lung causing closure of glottis which chokes the inflow of further air and produces the characteristic sounds tic Ninety-five cases who came mainly for hiccup, were analysed clinically and submitted to relevant investigation.

Mostly literature 1 – 5 mention the predominance of male (82%) affected upto ratio of 4:1 [3] but in present series the male to female ratio was 1:16:1, we have observed the predominance of female in 3rd (17.7%) decade of life where female were 17 out of 25 cases i.e. 68% and they had psychogenic origin i.e. historical (10 cases) and conversion reaction (4 cases), common age group involved where 3rd (27.3%) 4th (21.2%) and 5th (26.4) decades of life.

It has been mentioned that of it affects all age group including the foetus. In present series we have children below 10 years of age and 4 elderly person of above 60 years, among these 4 elderly person 3 had organic causes (2 obstructive jaundice and one inferior IHD, Hiccup sound observed were 3 types as described in literature 1-4, Majority of the patients (50 cases 52.6%) had benign self limiting with duration less than half hour and associated with predisposing factor, eg chilly spicy food (29.5%) and few of them had occasional alcoholic drinks. There were cases of benign self limiting but often duration was above one hour (26 cases or 27.3%), 19 cases (20.7%) had persistent intractable and associated with jerky movement and tremors. The most common associated feature was gastric distension flatulence and dysphagia (26.4%) with disturbance in throat and with often chest and abdominal discomfort. This type of associated feature had been discomfort due to hyperacidity and gastro oesophageal reflux [3, 5-7]. Hiccup was also due to psychogenic disorder of which conversion reaction (24.7%) and hysterical (10.5%) In Female were common. Organic disorder seen in 8 cases and as described it mostly involve the diaphragm and causes hiccup [7, 8].

As described most of them responded to nonmedical or home remedies 1-3,[9]. These were avoiding predisposing factor, valsalva manure various pranayam yogas etc. Often it is relieved by chilly cold milk ice-cream etc, 1 case of cerebrovascular accident (lacunar infarct) responded to acupuncture along with home remedies. Zhee *et al.*[10]; and Dietz *et al.*[11]; observe good result of acupuncture in persistent hiccup, Two cases of present series responded to Baclofen as reported by Turkey Limas A *et al.*; [12] None of the our patients needed anesthetic or invasive therapy.

Prognosis was good in most of our cases except in few cases (15 cases) who felt annoyed some time emarrassed in society, Two children developed stammering who were advised for speech therapy, two patients of obstructive jaundice with hepatic malignancy expired due to hepatic lesion and had hiccup till past.

CONCLUSION:

Hiccup is the disease of young adult and young person (2nd 3rd 4th decades) Female were mostly of age between 21- 30 years otherwise males are mostly affected Hiccup has the usual presentation, it is benign self limiting and shorter duration less than one hour, Few of them will have persistant intractable and presented more than one hour or even days, Hiccup responded mostly to home remedies and other conventional therapy. Pharmacologic therapy (antiflatulents prokinetics, sedative and amitryptiline) have good result overall prognosis was good.

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