

# A study of caustic injury of upper gastro intestinal tract

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## Abstract

**Introduction:** Ingestion of corrosive substances remains an important public health issue in Western countries despite education and regulatory efforts to reduce its occurrence. These injuries are still increasing in developing countries, related to the social, economic, and educational variables and mainly to a lack of prevention. This is record based study to see various clinical characters and differences in the two groups. **Aims and Objective:** To study the various clinical characters of Causticinjury of upper Gastrointestinal tract, and to see any differences observed in early (<5yr) and Late Group (>5Yr) **Methodology:** This is ten years retrospective study in this all the patients (N=65) ( of caustic injury within 10 years were studied , in that these patients were divided into two group based upon within 5yrs –Early group and more than 5yrs –Late group **Result:** significantly more number males and female were there from early group, Significantly more no of co-morbid conditions like Diabetes, Depression, No any Co-morbid condition, Other social illness were found in Early ingestion group. While no any significant difference found in Co-morbid conditions like Hypertension, Other medical illness. In purpose of ingestion of caustic in that there was significantly more trend of suicide by caustic ingestion in late group as compared to early group, but other purposes in early and late group were not significantly different. **Conclusion:** The caustic injury is mostly due to suicidal tendency, so early detection of this tendency and proper psychiatric counseling can reduce the incidence of this poisoning.

**Keywords:** Caustic injury, Acids, Alkalies, Gastro-intestinal Tract.

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Received Date: 02/08/2015 Revised Date: 22/09/2015 Accepted Date: 14/10/2015

Access this article online	
Quick Response Code:	Website: <a href="http://www.statperson.com">www.statperson.com</a>
	Volume 5 Issue 4

## INTRODUCTION

Ingestion of corrosive substances remains an important public health issue in Western countries despite education and regulatory efforts to reduce its occurrence. These injuries are still increasing in developing countries<sup>1,2</sup>, related to the social, economic, and educational variables and mainly to a lack of prevention<sup>3,4</sup>. Clinical presentation of corrosive injuries in the upper gastrointestinal tract depends on the physical state, type and quantity of the corrosive substance. Corrosive agents

in powder or crystal state adhere to oral cavity and throat, causing the most severe injuries to these organs as opposed to the liquid agents that pass rapidly through the esophagus and cause severe corrosive burns to entire organ with predilection of the cricopharyngeal area, at the level of the aortic arch and the lower esophageal sphincter<sup>5</sup>. The most severe gastric injuries are those of the antrum and pylorus where the caustic substance remains for a very long time<sup>6</sup>. According to the report of the American Association of Poison Control there are about 200,000 caustic poisonings annually, most frequently with acid and alkaline agents that are used as cleansing substances in the house holds<sup>7,8</sup>. Data about the Republic of Macedonia give evidence of about 75-80 corrosive poisonings per year, more frequently found in women and in 95% of the cases they are with suicidal intent<sup>9</sup>. Depending on the degree of post-corrosive injuries, stenosis along the entire esophagus appears, especially in distal and middle third of the esophagus, at the level of physiological narrowing and in the gastric antrum and pylorus<sup>10,11</sup>. This is record based study to see

various clinical characters and differences in the two groups.

### AIMS AND OBJECTIVE

To study the various clinical characters of Causticinjury of upper Gastrointestinal tract, and to see any differences observed in early (<5yr) and Late Group (>5Yr)

### RESULT

**Table 1:** Clinical Profile of Caustic Ingested Patients in Early and Late Group

Cahractestics		Total	Early	Late	p-value
Gender	Male	20 (100%)	15(75.00%)	5(25.00%)	P<0.05
	Female	45 (100%)	30 (66.66%)	15 (33.33%)	P<0.05
Comorbidity	Diabetes mellitus	3 (100%)	2 (66.66%)	1(33.33%)	P<0.05
	Hypertension	6(100%)	3 (50%)	3 (50%)	p>0.05
	Depression	18(100%)	15 (83.33%)	3 (16.66)	P<0.0005
	Other Psychiatric illness*	6 (100%)	5(83.33%)	1 (16.66%)	P<0.0005
	Other Medical illness**	15 (100%)	8 (53.33%)	7(46.66%)	p>0.05
	No- Comorbidity	7 (100%)	5 (71.42%)	2 (28.57%)	P<0.05
	Other social illness***	10 (100%)	7 (70.00%)	3 (30.00%)	P<0.05
<b>Purpose of Ingestion (suicide/accident/unknown)</b>		<b>46/13/6 (100%)</b>	<b>15(32.60%)*/7(53.84% )3(32.60%)</b>	<b>31(67.39%)*/6(46.15%)/3(5 0.00%</b>	<b>P&lt;0.05*/&gt;0.05/&gt;0.05.</b>

Other Psychiatric illness\*-Schizophrenia, atypical psychosis, adjustment disorder, dementia, alcoholism

Other Medical illness\*\*- Stroke, liver cirrhosis, chronic nephritis

Other social illness\*\*\*-Social illness like addiction, divorce, dowry, etc.

**From table 1:** it is clear that significantly more number males and female were there from early group, Significantly more no of co-morbid conditions like Diabetes, Depression, No any Co-morbid condition, Other social illness were found in Early ingestion group. While no any significant difference found in Co-morbid conditions like Hypertension, Other medical illness. In purpose of ingestion of caustic in that there was significantly more trend of suicide by caustic ingestion in late group as compared to early group, but other purposes in early and late group were not significantly different.

### DISCUSSION

The corrosive poisoning in the forms acids or alkalis is mostly due to suicidal tendency or having some psychiatric illness like Schizophrenia, depression or having social illnesses like Poverty, addictions, divorce, dowry or some time chronic illnesses like Stroke, liver cirrhosis, chronic nephritis so, these conditions provokes for the suicidal tendencies, but from our study it is observed that there is significantly decreased trend of use of corrosive for suicide in early and Late group, this could be due to easily availability of other painless methods. In our study it is found that significantly more number males and female were there from early group, Significantly more no of co-morbid conditions like Diabetes, Depression, No any Co-morbid condition, Other social

### MATERIAL AND METHODS

This is ten years retrospective study in this all the patients (N=65) (of caustic injury within 10 years were studied , in that these patients were divided into two group based upon within 5yrs –Early group and more than 5yrs –Late group in this two groups various clinical characteristics were compared, Chi-square test is used to compare the differences for statistical analysis.

illness were found in Early ingestion group. While no any significant difference found in Co-morbid conditions like Hypertension, Other medical illness. In purpose of ingestion of caustic in that there was significantly more trend of suicide by caustic ingestion in late group as compared to early group, but other purposes in early and late group were not significantly different. These Findings are similar to the studies of Yoon KW *et al* (2001)<sup>12</sup>, Kim YS *et al* (2009)<sup>13</sup>.

### CONCLUSION

The caustic injury is mostly due to suicidal tendency, so early detection of this tendency and proper psychiatric counseling can reduce the incidence of this poisoning.

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Source of Support: None Declared  
Conflict of Interest: None Declared