



## CUT THROAT INJURY BY 'MANJA' STRING SANGEETHA

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**Abstract :** Cut throat injuries can be suicidal, homicidal or accidental. Suicidal and homicidal cut throat injuries are common. Cut throat injuries are generally caused by the sharp edged weapons or objects. It is not uncommon that kite flying Manja strings also cause such cut throat injury. Kite flying is the common time pass activity of the children. In order to strengthen the kites string, a paste made of glass powder, glue and the grain flour named MANJA is applied on the kite string and dried, before using to fly the kites. While flying the kites, the children attempt to cut high flying kites by rubbing the opponents kite string with the help of their flying kites string, to prove their supremacy in the sky. Such cut off kite string dangle in the air before getting entangled in the branches of a tree or advertisement boards or any tall object. When both ends of the cut kite string are entangled and the kite string is taught and positioned across the road, would act as a sharp weapon and cause cut throat injuries especially to the two wheeler riders. Here, we have a case of a four year old child who sustained cut throat injuries by the kite string coated with Manja stretched across the road.

**Keyword :** Accidental cut throat injuries, manja, kite flying string, deal

### INTRODUCTION:

Manja is an abrasive mix used for strengthening the strings of the kites. It is prepared using gum, colour powder and powdered glass. It is practised in many South Asian and South American countries including India<sup>1</sup>. Kite fighting may be practised during special kite flying festivals or throughout the year. Two persons will entangle the glass powder coated manja string while flying their kites in the sky and try to cut off the string of each other's kites by pulling it which is called as kite battle<sup>1</sup>. The winner's kite keeps flying while the loser's kite gets cut and drifts away with the wind. Children and adults run after a cut kite and try to capture it when it falls to the ground. The practice of running after drifting kites that have been cut loose in the game is called 'Kite running'<sup>2</sup>. In India the kites are generally flown and fought from the rooftops of houses and in open places. When the kites fall off while flying they may get positioned and taught across the road and prove fatal to the road users, especially two wheeler riders. Handling the manja reels vigorously by pulling or releasing it during the battle is dangerous not only to humans but also to birds.

### CASE REPORT:

On 13th March of 2011, a four year old girl was seated on the

petrol tank of a two wheeler along with her parents to Marina beach. While travelling near Egmore a stray piece of sharp "MANJA STRING" used for flying kites had slashed her neck. Then she was shifted to a hospital in an unconscious state, where she was declared brought-dead. Next day, requisition was received from the Inspector of police, F2 Egmore - Police station at 10.30 A.M to conduct the autopsy on the body of that four year old girl.

On Postmortem Examination, the following injuries were found:

- 1) A linear reddish brown abrasion 6 x 0.5 cm on the right side of the neck.
- 2) A cut injury 1.5 x 0.5-1 x 0.7 cm on the palmar aspect of base of the right middle finger exposing the underlying soft tissues (Fig -1).



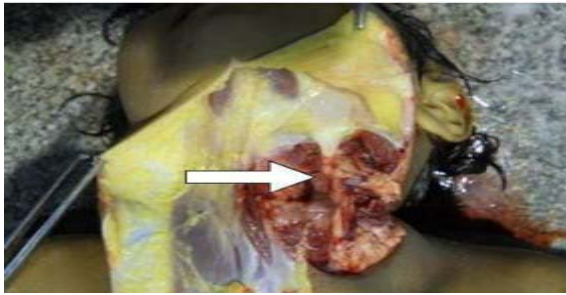
(Fig -1) A cut injury of size 1.5x 0.5-1x 0.7 cm on the palmar aspect of the right middle finger (Fig -2) A cut injury measuring 12 x 0.5-5x 0.2-0.7 cm on the left side of the neck



(Fig -2) A cut injury measuring 12 x 0.5-5x 0.2-0.7 cm on the left side of the neck

- 3) A cut injury measuring 12 x 0.5-5x 0.2-0.7cm on the left side of the neck extending from the anterior midline of the neck to the posterior midline. On the anterior part of the neck the upper margin was 5cm below the chin and the lower margin was 8cm above suprasternal notch (Fig-2). On dissection of the neck, there was extravasation of blood into the neck muscles of left

side exposing the cut ends of underlying platysma and left sternocleidomastoid muscle (Fig-3).



**Fig-3 Dissection of the neck showing the cut ends of left jugular vein**

The lower part of left submandibular salivary gland and left jugular vein were found cut. Left carotid artery was intact. Hyoid bone, larynx, trachea, thyroid and cricoid cartilages were intact. All structures in the right side of the neck were normal. All the internal organs were normal in size, Cut section was pale. **The opinion as to the cause of death was** "The deceased would appear to have died of shock and haemorrhage due to cut throat injury".

#### **DISCUSSION:**

Homicidal and suicidal cut throat injuries are common, whereas accidental cut throat injuries are relatively uncommon. Cut throat injury causes immediate death from haemorrhage, air embolism and trickling down of extravasated blood in to the respiratory tract. Contact between the manja string and human neck can lacerate the skin and the deep fascia of the neck and injure internal cervical structures, such as the carotid arteries, jugular veins, larynx, and trachea. The severity of the injury is related to the speed at which the manja string and the victim came into contact<sup>3</sup>.

#### **KITE FESTIVALS:**

Kite flying is one of the popular games for children and adults all over the world. It was first introduced 3000 years back in China. In India, Pakistan, and Bangladesh, people celebrate the arrival of spring season by celebrating a kite festival. These kite festivals include a game of kite fighting, in which participants used their kite to cut the string of an opponent's kite string. Manja, an abrasive material is often coated on the string of the kites to increase its durability and ability to cut other kite strings. Two kite fighters, while flying their kites in the air, entangle their kite strings coated with manja and try to cut off the strings of each other's kite, which is called as "**DEAL**" in the game. Winners kite keeps flying while losers kite gets cut and drifts away with the wind<sup>4</sup>.

#### **INJURIES ASSOCIATED WITH KITE FLYING:**

Kites are associated with various injuries, including accidents that occur during the preparation of the threads, electrical injuries from high tension currents, falls that occur during the game, or injuries caused to road users during kite flying, especially injuries to those riding motorcycles are more severe than those of pedestrians. The severity of the injuries to the two wheeler riders depends on both the speed of the vehicle and the kite string. Palmar aspect of the hand is the commonest site of injury to a kite-flyer or even to those who try to catch the kite string<sup>5, 6</sup>. The killer string which is white in color is more dangerous than the coloured thread because of its invisibility. As this thread moves very fast and is not easily visible, two wheeler riders are bound to get injured<sup>5</sup>. A news report says, 10 people were killed by accidents involving kite flying in Ahmedabad on Makar Sankranti. Among those three were decapitated by manja and seven were killed after falling off terraces or being run over by vehicles while chasing stray kites<sup>7</sup>.

#### **INGREDIENTS OF MANJA:**

**Manja** is an abrasive mix used for strengthening the strings of fighter kites. It can be prepared by mixing various materials with powdered glass (Fig-4).



**(Fig -4) Preparation of Manja**

The ingredients are unique with every individual maker and it is kept secret. The most common ingredients of manja in Chennai are, Powdered glass Adhesive Wheat flour Aluminium oxide, an abrasive Zirconia alumina, an abrasive Colouring agent The Industrial adhesive is boiled with water, to which a paste of wheat flour and finely powdered glass pieces are added to make a thick colloidal solution, then the colouring agent is added. After that it is stirred to make a thick paste without sedimentation of the glass and abrasives. Broken tube lights, broken soda bottle glass is used for making glass pieces. After making a paste of manja, the cotton thread was made to pass through it and dried<sup>8</sup> (Fig-5).

#### **(Fig -5) Cotton threads coloured and glass coated.**

#### **BANNING OF MANJA:**

Manja string is extremely deadly to birds flying in the sky and to humans. Flying of kite string coated with manja in overcrowded places was first banned in the city of Chennai in 2006 under section 71(14) of Madras City Police Act and also have registered a case under section 304 (A) (causing death due to negligence). This was banned by the department of environment and forests to protect the humans and birds from harmful injuries. Even after that many persons have been injured in similar incidence. People found violating this ban will be prosecuted under Section 5 of the Forest and Environment Protection Act.<sup>8</sup> If any merchant is found selling these killer threads, his goods will be seized and the offenders will be punished with a fine. Flying kites in residential areas is now a nonbailable offence and is punishable with a fine upto Rs1000 and imprisonment upto three months. The law was made stricter after the many serious injuries recently. The Madras High Court has declined kite producers' plea to direct the city police not to restrict the use of 'manja' (coated) thread for flying kites<sup>9</sup>.

#### **CONCLUSION:**

Many Preventive programs are implemented to reduce the number of kite-flying related invalidating sequels. The kite flying in public places are banned under Section 71 of the City Police Act. The offenders are punishable under non-bailable Sections 336 and 337 of the IPC, (causing hurt by act endangering life or personal safety of others). Section 5 of the Environment Protection Act says any chemical substance that causes harm to living beings is a violation of the law. It gives administrative authority to the state to take action against the trade of such substance<sup>9</sup>. Educational and preventive measures are necessary to avoid potentially fatal injuries. Precautions include choosing a safe location and keeping a safe distance from electricity cables, trees, roads and crowded places. A total ban on the sale of manja string would be the only solution to this endangering event.

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