BURNS DURING EASTER FESTIVITIES IN GREECE

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SUMMARY. Easter is the most important holiday for the Greek Church. It is rich in traditions and rituals but during the Greek Easter festivities, especially at midnight Mass on Easter Saturday night, it is customary to throw fireworks around. These fireworks are not part of the true Easter tradition and they are potentially fatal. Unfortunately, in the past few years, the custom has become more and more popular in Greece. There are some local variations, mainly in the Aegean islands, where homemade rockets are used to have a "rocket war". The rockets consist of wooden sticks loaded with an explosive mixture containing gunpowder and launched from special platforms. Many severe injuries involving loss of sight and limbs as well as major burns are also caused by the use of illegal fireworks at Easter. Every year numerous burn victims are hospitalized. The most affected areas are the face, the upper extremities, and the chest, often in association with slight or severe wounds and injuries. This study presents our department's experience with incidents due to the use of fireworks during Easter festivities.

Keywords: firework, burns, injuries, Greek Easter festivities

Introduction

Easter is the most important holiday for the Greek Church. It is rich in traditions and rituals but during Greek Easter festivities, especially at midnight Mass on Easter Saturday night, it is customary to throw fireworks about. These fireworks are not really part of the Easter tradition and they are potentially fatal. Unfortunately, in the past few years, the custom has become more and more popular in Greece. It features some local variations, mainly in the Aegean islands, where homemade rockets are used to wage a "rocket war" (*Fig. 1*). These rockets consist of wooden sticks loaded with an explosive mixture containing gunpowder and launched from special platforms. Many severe injuries involving loss of sight and limbs and major burns (*Fig. 2-4*) are caused by illegal fireworks during Greek Easter festivities.

Fig. 1 - The rocket war: Easter celebrations in the village of Vrontados at midnight on the Greek island of Chios.

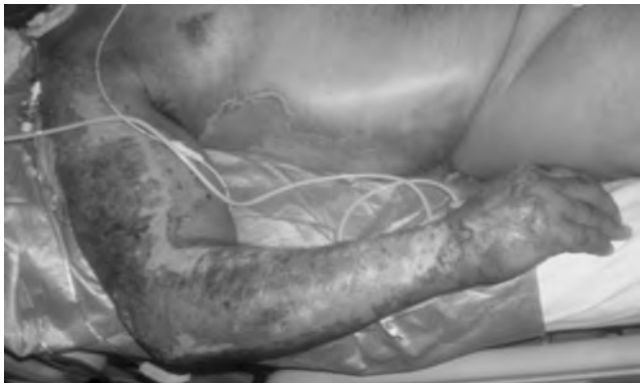

Fig. 2 - Burn of upper extremity during Easter festivities.

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Fig. 3 - Hand burn.

Fig. 4 - Severely injured burn patient.

At the clinic of Plastic and Reconstructive Surgery of Athens O Evaggelimos General Hospital many burn victims are hospitalized every year at Easter (*Table I*).

In this study we present our experience with fireworks victims in our department during Easter religious festivities in the last six years.

Materials and methods

This is a retrospective hospital-based study involving data collected from 2005 to 2010. A large number of patients with burns and related injuries are admitted to the Department of Plastic and Reconstructive Surgery of Athens O Evaggelimos General Hospital, many due to Easter fireworks. The year-to-year incidence is recorded: a total of 40 burn victims visited the emergency room of our hospital in the Easter period.

The number of patients over the past 9 years has been decreasing.

The majority of victims (92.5%) were males. The youngest patient was 15, and the oldest was 63. The largest

Fig. 5 - Upper extremity burn.

Fig. 6 - Major burn victim.

Table I - Incidence of burn victims related to the Greek Easter festivities during the 6-year period

Age (years)	>15-20	>20-25	>25-30	>30-35	>35-40	>40	Total
2005	-	3	4	3	-	-	10
2006	2	-	1	1	3	-	7
2007	-	2	3	2	2	-	9
2008	-	1	2	-	-	2	5
2009	-	-	2	2	-	-	4
2010	-	1	2	1	-	1	5
Total (%)	2 (5)	7 (17.5)	14 (35)	9 (22.5)	5 (12.5)	3 (7.5)	40

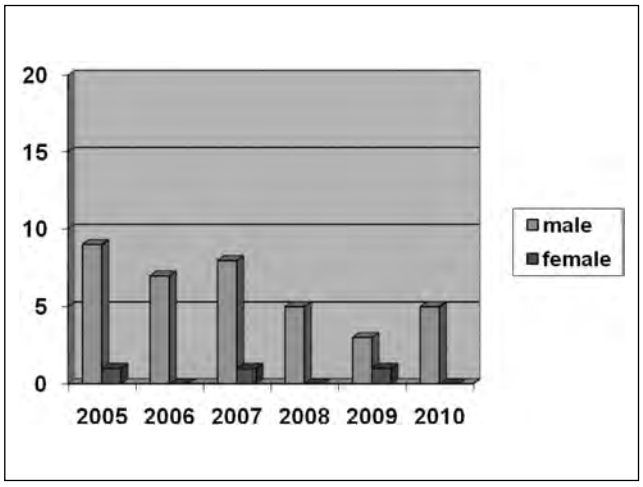

Table II - Distribution of burn victims related to the Greek Easter festivities according to sex and age.

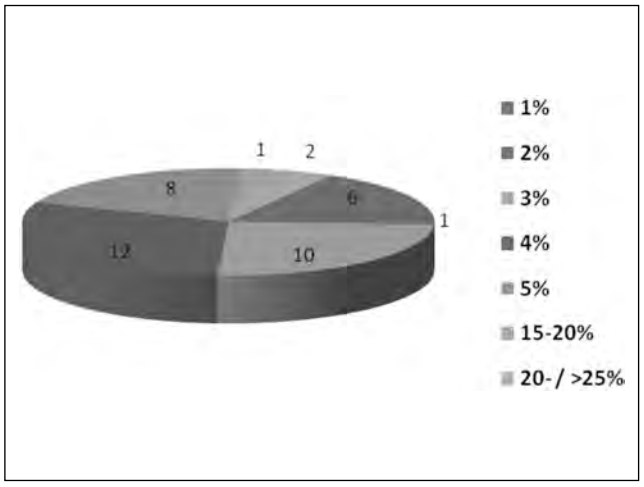

Table III - Distribution of patients according to burn injury surface.

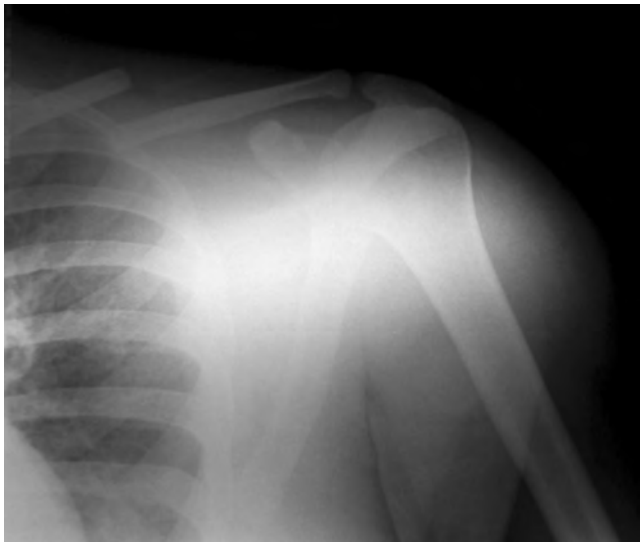

Fig. 7 - Patient with clavicle bone fracture.

age group (35%) was that between 25 and 30 years of age, with 5% of them falling within 15-20 years age range. The age distribution of these patients is given in *Table II*.

The majority of burns were minor (*Fig. 5*) and most of them were <7% total body surface area (TBSA). Only 7.5% patients sustained >15% TBSA burn (*Fig. 6*) (*Table III*). In three patients bone fractures also occurred (*Fig. 7*).

Injuries involving loss of sight were observed in one patient, while in three patients amputation of the hand was performed.

Discussion

Firecrackers are commonly used during celebrations because of their noise, sparkle, and sudden burst of colour, expressing the festive mood. The epidemiology and pattern of firecracker injuries differ from place to place around the world. Firecracker injuries in the USA affected approximately 10,000 persons annually from 1980 to 1989 as per the National Electronic Surveillance System,[1] while during 1990-2003, 85,800 paediatric firework-related injuries were treated.[2] In the UK, the number of firework-related injuries peaks during Halloween and Guy Fawkes Night.[3] In Denmark, over a 12-year period - from 1995-1996 to 2006-2007 - there were 4447 patients with firecracker-related injuries in two days on New Year's Eve.[4] Injuries caused by fireworks are a national problem in Greece, too. The reported incidence is 7 per 100,000 children annually, 70% of whom are in the 10-14 age group.[5]

In the present series of patients the age ranged from 15 to 63 years. This is unlike most of the earlier studies in which the commonest group affected was children below 16 years of age.[2,6,7]

Firework-related injuries are considered as preventable, and to reduce their threat, many countries have passed legislation in the past two decades.

Conclusion

The efforts by governments and legislative bodies have given mixed results. Fogarty and Gordon (1998) and Puri et al.[7] recommended forbidding the use of firecrackers to children under 5 years of age. Public education in schools, strict standardization of firecrackers, supervision by adults, restriction in personal use of firecrackers and in firecracker public displays have been suggested preventative measures.[7]

RÉSUMÉ. Pâques est la fête la plus importante pour l'Église grecque. Il est riche en traditions et rituels, mais pendant la fête des Pâques grecques, en particulier à la messe de minuit le samedi de Pâques, il est de coutume de jeter des feux d'artifice autour. Ces feux d'artifice ne font pas partie de la vraie tradition de Pâques et ils sont potentiellement mortels. Malheureusement, au cours des dernières années, la coutume est devenue de plus en plus populaire en Grèce. Il y a quelques variations locales, principalement dans les îles égéennes, où des roquettes artisanales sont utilisées pour faire une «guerre fusée". Les fusées sont constituées de baguettes de bois chargées de substances chimiques contenant de la poudre à canon et lancées en air du sommet de plateformes construites pour l'occasion. Les lésions sévères sont communes comme par exemple la cécité et la perte d'un membre, aussi à cause de l'utilisation de feux d'artifice illégaux à Pâques. Tous les ans nombreuses personnes sont hospitalisées. Les zones corporelles les plus touchées sont le visage, les membres supérieurs et le thorax, souvent en association avec d'autres lésions plus ou moins graves. Cette étude présente l'expérience de notre département des incidents liés à l'utilisation de feux d'artifice lors des fêtes de Pâques.

Mots-clés: feux d'artifice, brûlures, lésions, fêtes de Pâques grecques

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This paper was accepted on 18 October 2012.