

<http://www.pjbs.org>

PJBS

ISSN 1028-8880

**Pakistan
Journal of Biological Sciences**

ANSI*net*

Asian Network for Scientific Information
308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

Ricin and the Assassination of Georgi Markov

¹M. Papaloucas, ²C. Papaloucas and ¹A. Stergioulas

¹Faculty of Human Movement and Quality of Life, University of Peloponnese, Greece

²Department of Anatomy, Thrace University, Greece

Abstract: The purpose of this study was to investigate the dead reasons of Georgi Markov. Georgi Markov, a well known Bulgarian novelist and playwright, dissident of the communist regime in his country, escaped to England where, he dedicated himself in broadcasting from BBC World Service, the Radio Free Europe and the German Deutsche Welle against the communist party and especially against its leader Todor Zhivkov who in a party's meeting told that he wanted Markov silenced for ever. On the 7th September 1978 Markov received a deadly dose of the poison ricin by injection to his thigh by a specially modified umbrella. He died without a final diagnosis a few days later. The autopsy revealed the poisoning. The murderer, in spite of the efforts of the Police, Interpol and Diplomacy still remains unknown.

Key words: Assassination, biological weapons, *Ricinus communis*

INTRODUCTION

Georgi Markov, a well-known writer, dissident of the communist regime in his country Bulgaria, escaped to Britain in 1971. Since then he dedicated himself in criticizing the activities of the communist regime by broadcasting from the BBC, the Radio Free Europe and the German Deutsche Welle (Jackson and Jackson, 2004).

His speeches were so caustic against communism that the officials in Bulgaria at the time decided to close his mouth once and for ever. After this decision three attempts to kill Markov followed; two unsuccessful, one in Munich, another one in the island of Sardinia and the third one successful in London on the 7th of September 1978 (Audi *et al.*, 2005).

About three months previously to his death he had received an anonymous call by a man informing him that unless he stopped writing for the Radio Free Europe he would be executed (Benovska, 1993).

The aim of the present study was to explore on how Georgi Markov was died.

MATERIALS AND METHODS

Ricin, an extremely toxic poison, was selected for the purpose. Ricin is widely available and easily produced from the beans of the *Ricinus communis* plant which grows in Asia, the Middle East, Southern Europe and Southern USA (Patt and Feigin, 2002).

It has been estimated that one million tones of the beans are processed annually all over the world for the production of castor oil; the waste mash from this process is 5% ricin by weight (Doan, 2004).

Ricin is much more lethal than cobra venom (Doan, 2004). Its fatal dose, when administered intravenously to experimental animals, has been reported to be as low as 300 ng kg⁻¹ for a man the lethal dose is 5-10 µg kg m⁻¹ (Bradberry *et al.*, 2003).

It can be delivered by various routes, as an aerosol spray, per os, intravenously or intramuscularly (Doan, 2004).

Accidental poisoning with ricin has been reported in children, who sometimes, use to chew the seeds of the plant *Ricinus communis*; the hard coat of the seed, which prevents the absorption of the toxin, brakes and the toxin is released and absorbed (Parfitt, 1999).

In the tropics they use to chew these seeds for their purgative effect which, in few cases, has led to death.

Intramuscularly self-injected ricin in attempting suicide has also been reported (Passeron *et al.*, 2004).

When ricin is administered intramuscularly, as in Markov's case, the symptoms appear a few hours later and comprise high fever, abdominal pain, vomiting, diarrhoea (sometimes bloody), severe dehydration, a decrease in urine and blood pressure and a very high white blood cell count.

All these symptoms imitate and appear in hospital investigations as usual diseases (Audi *et al.*, 2005).

On September the 7th 1978 (Zhivkov's 67th birthday) while Markov was waiting at the queue to get a bus at the Waterloo bridge bus station he felt a stinging pain at his right thigh, he turned and saw a man bending to pick up a dropped umbrella. The man apologised with a foreign accent called a taxi and left (Doan, 2004).

By the evening Markov developed a high temperature and was admitted to St. James Hospital in

Balham with high fever, abdominal pains, vomiting, diarrhoea and white blood cells count as high as $3,32 \times 10^3 \text{ mm}^{-3}$ (Parfitt, 1999).

Doctors quickly realised that he was not responding to any treatment. The next day he went into shock and three days afterwards, on the 11th September, he died.

The preliminary diagnosis of the cause of death was septicaemia (Khristov, 2005).

Georgi Markov has been buried in the churchyard of Whitchurch, Dorset. On his gravestone there is the epitaph: Georgi Markov died for the cause of freedom (Benovska, 1993).

At an autopsy performed at Wandsworth Public Mortuary a small pellet of $1.7 \times 10^{-3} \text{ m}$ in diameter with two $0.34 \times 10^{-3} \text{ m}$ empty holes drilled in the pellet producing an X shaped cavity, capable to hold a very small amount of poison less than $500 \times 10^{-3} \text{ mL}$ (Parfitt, 1999), was extracted from Markov's right thigh wound. This was sufficient to understand that Markov did not die a natural death and Scotland Yard's investigating team undertook the effort to clear up the case.

Four months later the coroner's inquest in London ruled that Markov had been murdered with the deadly toxic poison ricin (Benovska, 1993), which was contained in the pellet, in a quantity less than $500 \times 10^{-3} \text{ mL}$ which was enough to kill an adult, implanted into Markov's thigh through the tip of a specially modified umbrella.

RESULTS AND DISCUSSION

Few years after Markov's assassination two former KGB officers, Oleg Kalugin and Oleg Gorrdivsky, admitted publicly the Soviet complicity in the murder (Benovska, 1993).

However, Markov's assassination, almost after 30 years, remains still unsolved in spite of the efforts of the Police, Interpol and Diplomacy. The man who killed Markov still remains unknown and according to the Bulgarian law after the elapsing of 30 years no prosecution can be started against somebody for first degree murder. This means that if the case is not reopened and if an indictment is not brought in by the 10th of September 2008 the murderer can appear publicly and declare: I killed Markov (Khristov, 2005).

Markov was honoured posthumously. The Bulgarian President Peter Stoyanov on the 28th December 2000 presented to his daughter Sasha the Order of Stara Planina, Bulgaria's highest honour for his remarkable contribution to Bulgarian literature and his opposition to the communist authorities (Khristov, 2005).

On June 15th 2005, the presentation of the book *kill wanderer* by Hristo Hristov (the title of the book was symbolically the same as the codename used by the secret services for Markov) in which the most notorious assassins of the Soviet era's were revealed. The cousin of Georgi Markov, Lyuben Markov, participated at the presentation and made this emotional address to the guests: one person can be deceived at a time, you can also deceive all the people at a time, but you cannot lie to all of the people all of the time (Khristov, 2005).

Most unfortunately, it seems that Markov's murderer will remain unknown, as it can be easily understood by the following: After the collapse of communism in Bulgaria in 1989, the British Foreign Secretary Robin Cook, met with the Bulgarian President Peter Stoyanov in 1998 and asked him if there were any progress in the investigations regarding the assassination of Georgi Markov. Stoyanov answered: It is painful for every Bulgarian democrat, but leaving the scene, communism has taken to its grave also some secrets, such as the files about the murder of Georgi Markov.

REFERENCES

- Audi, J., M. Belson, M. Patel and J. Osterloh, 2005. Ricin poisoning: A comprehensive review. *JAMA.*, 294: 2342-2351.
- Benovska, I., 1993. *Georgi Markov*. 1st Edn., Izd-vo Ezik i Kultura Publ., Kultura, ISBN: 9548161117.
- Bradberry, S.M., K.J. Dickers, P. Rice, G.D. Griffiths and J.A. Vale, 2003. Ricin poisoning. *Toxicol. Rev.*, 22: 65-70.
- Doan, L.G., 2004. Ricin: Mechanism of toxicity, clinical manifestations and vaccine development. *J. Toxicol. Clin. Toxicol.*, 42: 201-208.
- Jackson, A.R.W. and J.M. Jackson, 2004. *Forensic Science*. 1st Edn., Pearson Education Ltd., Harlow, England, ISBN: 0131998803.
- Khristov, K., 2005. *Bulgarskata I Britanskata Durzhavna Politika Po Sluchaia Georgi Markov*. 1st Edn., Siela Publ., USA, ISBN: 9546498009.
- Parfitt, K., 1999. *Martindale: The Complete Drug Reference*. 32nd Edn., Pharmaceutical Press, London, ISBN: 0890439281, pp: 1625.
- Passeron, T., F. Mantoux, J.P. Lacour, P.M. Roger and T. Fosse *et al.*, 2004. Infectious and toxic cellulitis due to suicide attempt by subcutaneous injection of ricin. *Br. J. Dermatol.*, 150: 154-154.
- Patt, A.H. and R.D. Feigin, 2002. Diagnosis and management of suspected cases of bioterrorism: A pediatric perspective. *Pediatrics*, 109: 685-692.