

CRIMEAN CONGO HAEMORRHAGIC FEVER AS AN INDICATION FOR USE OF RIBAVIRIN

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Human cases of Crimean Congo Haemorrhagic Fever (CCHF) have been reported from Central and Black Sea geographical regions of Turkey since 2002 with increasing morbidity rate and some fatalities.^{1,2} Cluster of cases seen in the suburban villages of Black Sea Mountains, especially inner and drier parts of the higher sea level are the most effected epidemic regions. According to the current experience from the epidemic region, there are a few clinical and epidemiologically re-emerging points which need to be highlighted about this deadly viral infection.

First, protection of tick exposure and appropriate tick removal has a life saving potency. Second, there is an urgent need for a close collaboration between academic/scientific centers and other state health officials to recognize the magnitude and future of the epidemic. It is so far an important issue since the nature of CCHF is complicated with transstadial and transovarial persistence and transmission pattern (from infected female tick to eggs; larval stages to nymph). The mode of transmission gives rise to prolonging the contamination of soil for a longer period of time and an increase of dissemination of infected tick populations. Thus, definitive result will be expanding of the epidemic.

Third and the most important, early ribavirin use in the beginning of illness has significant positive effect on survival.³⁻⁵ In this regard, there

are some administrative problems in Turkey rising from the indication list of ribavirin on western drug market. Ribavirin is a WHO recommended anti-viral for CCHF. Unfortunately, ribavirin has not been on the official list of western pharmaceutical companies for use in CCHF. As such it is not practically possible to reimburse the expense of this medication when used for CCHF patients in Turkey. The drug companies promote this drug for management of Hepatitis-C and so far have no intention to add CCHF as one of its indications. This is partly because CCHF is not frequently seen infection in western countries. These countries are out range of the bird migration routes. On the other hand, Ribavirin is not an inexpensive medication in many western countries including Turkey. Intravenous form of the drug is not available for the patients who can not tolerate the drug orally. Usually the effected population is patients coming from the farms of rural areas and they are not rich enough to buy the medication from their limited sources. Too many administrative procedures are needed to use "out of indication drug in such a situation because of urgent medical care in this deadly infection." It is suggested that drug companies in the West should immediately add the CCHF as an indication for Ribavirin to solve this important and life saving administrative problem and for a more practical way for early use of this essential anti-viral.

KEY WORDS: CCHF, Emergence, Ribavirin.

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Corneal complications with phacoemulsification cataract surgery

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I read the article by Ali et al¹ with interest. In their descriptive, un-controlled case series they report corneal complications with phacoemulsification by a beginner surgeon. They report that 40% of the eyes had corneal abrasion and 53% developed corneal oedema on the first post operative day.

I believe there is a significant likelihood of observer bias and the conclusions of the authors, without a statistical test, are misleading. Ideally a univariate and subsequent multivariate analyses should have been carried out to identify statistically significant risk factors for corneal problems with phacoemulsification by beginner surgeons. Observations in the study, such as the type of cataract, corneal abrasion and oedema were assessed subjectively. This can introduce observer bias. Preferably corneal damage after cataract surgery should be assessed objectively by endothelial cell loss through specular microscopy.² Because corneal swelling post phacoemulsification is directly proportional to endothelial cell loss,³ this may be used as a proxy. Objective methods to assess corneal thickening include, pachymetry, IOL Master and ultrasound A scan. One of these instruments is likely to be available in a department where cataract surgery is performed, as they are essential for pre-operative IOL implant power estimation.

When subjective slit-lamp corneal thickness assessment is performed, observer bias can be avoided by standardising the observations. Two observers should examine each patient masked to each others assessment and to the other variables of surgery such as the type of ultrasound machine, time taken to perform surgery, and any per-operative complications.

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Inter-observer agreement should be reported. For example to assess cataract density a standardised system of grading such as Lens Opacity Classification System (LOCS) III is generally preferred.⁴

In this study 80% of the cases underwent phacoemulsification via phaco-chop technique; the techniques used in the remaining cases are not reported. It is known that phaco-chop technique is less traumatic to the corneal endothelium.⁵ It is possible that majority of the corneal oedema reported in this study occurred in the non phaco-chop group. The total duration of cataract surgery, intra-operative complications and the type of irrigation fluid used are also not reported. These factors directly influence corneal endothelial damage. Particularly in cases where posterior capsule is breached and anterior vitrectomy is performed, corneal oedema, with Descemet's membrane folds, is not an uncommon feature the following day.

Phacoemulsification utilises ultrasonic energy to emulsify cataract. This energy can also damage corneal endothelium. Absolute phaco time (APT) or the effective phaco time is a product of average phaco power and phaco time (time spent in foot pedal position 3). APT is the equivalent phaco time at 100% power (APT = phaco time X average phaco power). The lower the APT, the clearer the cornea, and the sharper the vision on first postoperative day. Mean APT was not reported in the current study. In fact the only other similar study examining corneal damage during phacoemulsification reported a long APT to be an independent risk factor in multivariate analysis.⁶

Conflict of interest: None.

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