flight. The trip lasted 2.5 h and the kidney was transplanted into ‘D’ after 4 h of cold ischemia at the HVN. During this time, the kidney of ‘C’ remained in cold ischemia until the plane that landed in Granada came back to Barcelona and was transplanted in ‘E’ with 5 h and 15 min of cold ischemia. At 7:30 PM, the transplant was completed and the chain was closed (Fig. 1).

The donors of both hospitals were discharged at 3 and 4 days, respectively. Two of the three recipients were discharged on the seventh day with a creatinine of 1.2 and 1.4 mg/dl. The third recipient showed a periurethral hematoma which required surgical revision, being discharged on the tenth day with creatinine of 1.2 mg/dl. The experience with the first chain of transplants performed in Spain has been very positive, considering that three receptors have been transplanted thanks to an altruistic donor. This new pathway in renal transplantation opens the door to a large number of patients who could potentially benefit from this possibility.

References


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Hexavalent chromium and bladder cancer risk

Como hexavalente y riesgo de cáncer de vejiga

Dear Editor:

We have recently completed a study on the follow-up of patients with superficial bladder carcinoma. This controlled prospective study took place at the General Hospital of Thebes (Viotia, Greece) from April 2006 to February 2009. More precisely, the study group included a total of 45 patients who had a recent history of recurrent superficial bladder cancer and subsequent TUR-BTs. Upon the completion of the study we realized that the 42% recurrence rate observed in our sample is unusually high, given that it actually represents the recurrences in the time between two cystoscopies. The reasons explaining this finding are practically unknown. It could be hypothesized that it may be due to the relatively large number of high risk bladder cancer patients (no. 7). Another reason explaining the high recurrence rate could be the fact that all the patients are from the cities of Thiva, Inofyta and Schimatari, (Thiva-Tanagra-Malakasa basin, Eastern Sterea Ellada, Greece), which support many industrial activities. According to our investigations, all the subjects with a confirmed bladder cancer recurrence consume tap water. Concentrations of chromium (up to 80 mg/L Cr(VI)) have recently been found in the urban water supply of Inofyta city. Cr(VI) concentrations ranging from 5 to 33 mg/L were found in groundwater that is used for Thiva’s water supply. Arsenic concentrations up to 34 mg/L along with Cr(VI) levels up to 40 mg/L were detected in Schimatari’s water supply.1

Hexavalent chromium is a potent carcinogen and previous studies have shown that it causes lung cancer in humans in certain occupational settings as a result of inhalation exposure.2 So far as we know, carcinogen exposure via consumption of drinking water has been investigated previously and is potentially of importance. In fact, the use of drinking water contaminated by nitrate, hexavalent chromium, and other heavy metals from industrial discharges has been associated with carcinogenesis.2-4 and a large American study has found that drinking more fluids is associated with a significantly decreased rate of bladder cancer.5 Interestingly, a more focused experimental study demonstrated that hexavalent chromium can cause bladder cancer in animals when administered orally.6 The specific mechanism remains unclear; however, it might be associated to tap water concentrations of heavy metals. This urogenous-contact hypothesis could play a role in Greece since the warm climate favors dehydration which itself increases the urine concentration.

Actually, an older epidemiologic study in the above region demonstrated that cancer mortality in this area is 14% higher than in other areas of Viotia, the prefecture in which it is located. Alarmingly, it also showed that the incidence of cancer fatalities had increased by 90% in 2009 alone, and deaths from cancer of the urinal tract are 841% higher than similar fatalities elsewhere in Viotia.7

Against a background of increased knowledge and interest in bladder cancer specific pathophysiology, our knowledge on epidemiology and risk factors is still limited and the exact genetic events leading to the development of bladder cancer remain unknown. According to the current knowledge, cigarette smoking and occupational exposure have been recognized as risk factors8,9 while cyclophosphamide treatment and urothelial trauma have been -only-proposed to be.10,11 The only well established carcinogens are alpha- and beta-naphthylamine, benzidine, and 4-aminobiphenyl.

Currently, it is not known whether hexavalent chromium promotes bladder cancer development and if the drinking of contaminated water is linked to its recurrence. However, there is no doubt about the urgent need for a better understanding of the early phase/initiation of bladder cancer in view of all the potential carcinogenic substances in order to decrease the high prevalence of the disease. Epidemiologic investigations should consider the complex pathogenesis of bladder cancer and the fact that many patients are in contact with multiple potential carcinogenic agents. Ideally, this would require a prospective multicenter data collection/analysis based on a standardized database including a strict defined patient cohort with detailed patients history and a long follow-up.

Considering the abovementioned study regarding the overall cancer prevalence in the cities of Thiva, Inofyta and Schimatari, we do believe that epidemiologic studies are also necessary to assess the prevalence of bladder cancer in the region above.

References

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Successful treatment of post circumcision glanular ischemia–necrosis with hyperbaric oxygen and intravenous pentoxifylline12

Tratamiento exitoso de la necrosis isquémica del gland poscircuncisión con oxígeno hiperbárico y pentoxifilina intravenosa

Dear Editor:

Circumcision, the most common surgical procedure in boys, is not totally free of complications with an incidence of 1.5–5%.1 Ischemic complications after the procedure are rare and commonly due to administration of vasoconstrictive local anesthetics.2 We have recently read that hyperbaric oxygen treatment (HBOT) can be of help to treat both actinic hemorrhagic cystitis and Fournier’s gangrene.3,4 We have successfully treated a 5-year-old child with severe glanular ischemia with hyperbaric oxygen treatment and intravenous pentoxifylline.

He underwent circumcision with an adrenaline containing local anesthesia 4 days prior to admission. Physical examination revealed brownish coloration of the glans penis and superficial necrosis of the glanular epithelium (Fig. 1). Penile color Doppler examination revealed normal dorsal penile artery blood flow and lack of arterial signals in the cavernous bodies and glans penis. Venous blood flow was normal. The patient was hospitalized and IV pentoxifylline (10mg/kg), divided in four doses daily, was started together with HBOT with 2.5 atm pressure for 90-min-long sessions. On the 2nd day of admission, the color of the glans began to lighten, and on the 5th day, it appeared