conventional heparin for first 3 days, subsequently switched over to oral anticoagulant i.e. warfarin at a dose of 4 mg per day. One day following the warfarin therapy, patient developed pain and swelling of the penis as well as retention of urine. On examination, penis was swollen and there were multiple purple bullae with serous exudates over the penis. Hemogram, blood biochemistry was within normal limits. His prothrombin time was 28.2 seconds (control 11-13 seconds). Warfarin was withdrawn and conventional heparin started. Vitamin K and fresh frozen plasma were also administered. Patient was catheterized for retention of urine. As patient did not improve in 48 hours, an opinion of urologist was taken and wound debridement along with cavernous shunt was carried out. Patient improved after 2 days. Thrombophilia screening showed normal level of protein S and antithrombin III. Protein C level was 32% suggesting protein C deficiency. Screening of the family members revealed his sister had also protein C deficiency. After 2 weeks of heparin therapy, warfarin was restarted with a low dose i.e. 1 mg / day, without a loading dose along with heparin. Warfarin was gradually increased to 4 mg/day over a period of fifteen days and heparin was discontinued. Patient was discharged from the hospital on warfarin (4mg / day) and is on follow up.

Warfarin-induced skin necrosis is a rare side effect of the drug and is estimated to occur in only 0.01-0.1% of patients taking the drug. The etiology of warfarin induced skin necrosis is obscure and is thought to occur from a transient imbalance in the procoagulant and anticoagulant pathways leading to small vessel thrombosis and subsequent dermal necrosis. Areas rich in subcutaneous fatty tissues are typically involved, particularly the breasts, thighs and buttocks. Warfarin induced penile necrosis with priapism is rare. Only few cases have been reported in literature. The condition must be differentiated from cellulitis. Amputation of the penis should be avoided, since necrosis usually is limited to superficial tissues. Many of these patients have protein C deficiency. Acute management includes vitamin K and plasma supplementations as well as parenteral anticoagulant until necrotic lesions have healed. In some patients it may be possible to restart warfarin, but needs to be done slowly. Our patient recovered with conservative management and warfarin was successfully re-instituted without further complication. Clinicians and urologist should be aware of this condition to make correct diagnosis and initiate appropriate therapy so that the patient could be spared of unnecessary penile amputation.

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Leptospirosis in Chennai - Changing Clinical Profile

Sir,

In a recent article, M Jayakumar et al from Chennai have stated that acute renal failure (ARF) due to leptospirosis in Chennai has significantly declined from 31% in 1987–91 to 7.5% in 1995–2004. Of the 120 cases of leptospiral ARF during the period 1987–91, the highest number of 45 cases were reported in 1990. Since 1992, there has been a decline in leptospiral ARF cases and during a 10 years period from 1995-2004, only 84 cases were reported.

Our experience also suggests that though severe leptospirosis has declined, mild leptospirosis has increased. In a study of 57 cases in 1990-91, Jaundice occurred in 84% and renal failure occurred in 72%. Serogroup Automnalis was the most common serogroup encountered. 26 patients were dialysed and two patients died. In a recent study of 106 cases of leptospirosis from North Chennai, Jaundice occurred in 17.8% and renal failure occurred in 10.3% showing a decline in complications. Fever, headache and myalgia were the common presentations. Only 2 patients were dialysed and there were no deaths. Contaminated environment (95%) and rainfall (50%) were the important epidemiological risk factors. Icterohemorrhagiae was the most common serogroup and Automnalis was not detected.

The reasons for decline of severe leptospirosis suggested were greater awareness of the disease, availability of better diagnostic facilities and widespread use of antibiotics. In addition, serogroup Automnalis, a virulent serogroup causing severe leptospirosis has also declined since 1995. The seropositive prevalence rate in Chennai was 32.9% in 1993. The increase in mild leptospirosis suggests that the environmental risk factors (infected rodents and domestic animals, contaminated environment and rainfall) play an important role in the persistence and spread of the disease. Intensive surveillance for early detection of mild leptospirosis with appropriate therapy would definitely play an important role in reducing the incidence of severe leptospirosis. Since diagnostic tests become positive only after 5 days, it would be appropriate to start empiric therapy in suspect cases of leptospirosis with Doxycycline or other appropriate antibiotics.
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Reply from the Authors
Sir,
The etiological spectrum of acute renal failure (ARF) is different in developing countries from developed countries, which is closely related to the environmental and the prevailing socio-economic conditions. diarrhoeal diseases and tropical diseases still predominate as the cause of ARF in the developing World. Leptospirosis was the commonest cause accounting for 31% of ARF between 1987-1991.1

The epidemiologic patterns of infectious diseases are liable to change in course of time. Leptospirosis is no exception to this rule. It has been a worldwide trend that the incidence of leptospirosis is declining, however new serovars are reported from time to time.2-3 Knowledge of changing epidemiological, serological and clinical profile of leptospirosis is essential for successful prevention, early diagnosis and treatment.

Professor Shivakumar has pointed out that the incidence of severe leptospirosis is declining whereas that of mild leptospirosis is increasing. Recently published our centre experience is that ARF due to leptospirosis has significantly declined from 31% in 1987-1991 to 7.5% in 1995-2004.4 We treated 84 patients with leptospirosis ARF between 1995-2004. Their mean age was 40.48 ± 3.74 years. There was a male preponderance (2.5:1). 53.5% required dialysis. Two patients treated with continuous renal replacement therapy. 62.3% had oliguric renal failure. The overall mortality is 9.5%. The poor prognostic factors associated with mortality were high entry serum creatinine, sepsis, anaemia and hypoalbuminemia.

The serovars noted by us were L. autumnalis, icterohemorrhagica, pomona and australis. The most common species noted by us was L. autumnalis (62%) in contrast to our previous observation wherein icterohemorrhagica was the commonest serovar.5 The probable reason for the predominant L. autumnalis serovar in our data could be due to inclusion of severe cases. We also noted that there is an annual declining trend in the last 10 years. We had 20 cases of leptospirosis ARF in 1995 vis a vis just six in 2004.

We cannot comment on the fact that mild leptospirosis is increasing as our study had only included patients with ARF due to leptospirosis. It is a retrospective study wherein data was collected from case records of nephrology department, hence subject to selection bias. It is a well known fact that it is notoriously difficult to obtain reliable data on morbidity and mortality in leptospirosis as mild cases cannot be recognized and even severe cases may be confused with other diseases with similar uncharacteristic clinical picture. We feel a detailed long term large scale epidemiologic study from febrile patients including patients attending the outpatient department can only answer this question as patients with severe myalgia, fever and conjunctival suffusion are tend to be overdiagnosed as leptospirosis without confirmatory diagnostic tests.

Leptospirosis being a very important zoonotic disease and its complications can be sinister, we need a large scale epidemiological survey in order to detect the disease early, to institute appropriate therapy and prevent complications.

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A Proof of Concept, Preliminary Study to Determine the Effect of Yogasnas in Controlling Type 2 Diabetes Mellitus in Newly Detected Subjects (When Compared to Metformin Monotherapy)
Sir,

Studies have shown that Yogasanas may be used as an adjunct with diet and drugs in the management of Type 2 diabetes.1 This study was conducted to prove the concept that newly detected type 2 diabetic subjects with near normal HbA1c could be treated with alternative method such as yogasana. A comparison of the outcome was done with a sample receiving metformin.