Most readers must be aware that India will soon emerge as the diabetic capital of the world with an estimated 66 million afflicted by 2025. But how many of us know about the devastating complication of diabetic foot that occurs in almost one-third of the diabetics?

In fact, this presents as the most common case in podiatry and if not properly tended to, the end result is an amputated leg. According to an estimate, about 50,000 amputations occur annually in our country due to diabetes-related foot problems. This process in most diabetics initiates as a minor foot wound, sometimes as innocuous as a blister in the foot or a shoe bite. If left untreated, it develops into a serious infection (Figure 1).

The scary element in this progression is that the infection is often painless and hence hardly noticeable unless it is an open wound or it starts oozing. The propensity for foot ulcers, also known as gangrene, in diabetics is attributed to vasculopathy (narrowing of blood vessels) while the lack of sensation associated with this infectious condition is due to neuropathy (damage to nerves). With such a high prevalence in diabetics, this presents a very real threat of permanent disability amongst these patients.

With the rise in diabetic population, the number of diabetic foot cases is bound to increase in the coming years. Interestingly, a vast majority of these cases are potentially preventable. However, the problem is brought to the attention of a specialist only at the very advanced stages when there are not many options left other than amputation.

Moreover, the clinical profile of this complication differs in our country due to a number of factors like the practice of walking barefoot, wearing inappropriate footwear, illiteracy, low socioeconomic status, faith in alternative systems of medicine, lack of awareness amongst primary care physicians about the complications and consequences of diabetic foot as well as the non-existence of the practice of podiatry in most hospital setups. India urgently needs trained podiatrists and podiatry centres in primary, secondary and tertiary level care. Although many private sector hospitals are now taking steps to fill this void, it is critical that such measures be initiated on an immediate basis in government clinics given the fact that the healthcare costs in private sector is beyond the reach of the common citizen. As a first step, there should be a heightened awareness among healthcare professionals about diabetic foot. Following such a campaign, sustained training is to be provided to these select professionals to manage the cases that present at their respective centres. Subsequently, these trained professionals are expected to transmit their knowledge and skills to other healthcare professionals.

Simultaneously, at a more fundamental level, diabetics need to be empowered to care for their feet better, detect problems earlier and seek timely help if and when such problems are detected.
Table 1. Some foot care tips for diabetics

<table>
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<tr>
<th>DOs</th>
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<tbody>
<tr>
<td>1. Inspect your feet daily using a mirror or taking somebody’s help</td>
<td>1. Never venture barefoot anywhere, inside or outside</td>
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<tr>
<td>2. Always wear correctly fitting footwear, inside or outside to protect your feet</td>
<td>2. Avoid wearing torn shoes or shoes with rough and uneven seams</td>
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<tr>
<td>3. Wear socks with shoes and wash them daily</td>
<td>3. Don’t opt to wear tight socks or knee-highs</td>
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<tr>
<td>4. Wash your feet with soap/water; dry them especially between the toes and use lotion or oil to keep feet soft</td>
<td>4. Don’t wash your feet with hot water or allow them to dry up and get cracked</td>
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<tr>
<td>5. Cut toe nails straight across and file sharp edges</td>
<td>5. Don’t use corn medicines or blades</td>
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<tr>
<td>6. Keep wounds covered with a clean dressing</td>
<td>6. Avoid heater to warm your feet</td>
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<tr>
<td>7. Have your feet checked periodically by a doctor</td>
<td>7. Don’t smoke or use tobacco products</td>
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There have been significant improvements in diabetic foot management - from the latest footwear technologies to the advanced wound care modalities including vacuum-assisted closure (VAC), regenerative tissue matrix, ultrasound debridement, tissue growth factors, external fixators and the ability to opt for reconstructive surgeries. But the prohibitive cost associated restricts their utility in Indian scenario. The importance of a holistic approach in the management of diabetes cannot be overemphasized.

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Dr. Emdad Hossain. Professor, Department of Pharmacology, Pharmacy College, Itaura, Chandeshwar, Azamgarh, Uttar Pradesh, India delivered a plenary lecture on ‘Anti-anxiety activity of methanol extract of Dregea volubilis leaves’ in the British Council sponsored International Conference on ‘Updates on Natural Products in Medicine and Healthcare Systems’ organized by Biotechnology and Genetic Engineering Discipline, Khulna University, Khulna, Bangladesh on 6th July, 2013. Dr. Hossain is recipient of ‘Best Teacher Award 2002’ and life member of many professional bodies like APP, APTI, IPA, IHPA, IPGA, ISSST, ISCA, IPS, ICS etc. He is also associate editor of ‘Herald Journal of Biochemistry and Bioinformatics’.

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HEAT TREATMENT EFFECTIVELY REDUCES MICROBIAL LOAD IN ANIMAL FEED SAMPLES

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This review highlights the wide diversity of microorganisms which remain present in the animal (swine) feed samples. In the feed samples, E. coli remains as the major pathogen followed by gram positive rods and bacilli and Enterococcus spp. Besides, members of the family Enterobacteriaceae, Pseudomonas spp., Staphylococcus sp., Streptococcus spp. and gram-positive rods, and bacilli also stay as predominant microbiota.

Key words: Feed, Microorganisms, Swine

Introduction
The feed which is offered to swines is the major source of pathogenic microorganisms. Many bacterial pathogens that are conveyed by foods invade the intestinal mucosa (Salmonella, some Shigella and some enteropathogenic strains of Escherichia coli) causing true infection. Others release enterotoxins during growth or lysis (Vibrio cholerae, some enteropathogenic Escherichia coli), or during sporulation, Clostridium perfringens in the gut. Other bacteria such as Clostridium botulinum and Staphylococcus aureus, produce toxins as they proliferate within a food, and when the food is eaten, cause an intoxication. However, other agents have been found to cause food borne disease such as Bacillus cereus, enteropathogenic Escherichia coli. Vibrio parahaemolyticus, and Yersinia enterocolitica. The present review discusses on the remedial measures to reduce the microbial load in feed mainly by cooking and/or steam treatment (Gagrai et al 2011).

Clostridium perfringens were isolated from 185 (28.80%) of 642 fodder and feed samples examined. The concentration ranged from $10^2$ to $2.30 \times 10^5$. Pirie and Harrigan (1962) found heat treatments caused a reduction of over 99.90% in Clostridium welchii added to the meat mix. Twenty of these above isolates were identifiable for their genus on the basis of the cultural, morphology, staining and biochemical characters and suggestive for belonging to Clostridium species. As per findings of Strong et al (1962), the incidence of Clostridium perfringens was 4.10% in 610 food samples. Komnenov et al (1981) reported Clostridium perfringens from 64% out of total 86 feed samples (concentrates and mixes).

Summary
Cooking or boiling of kitchen waste reduces the bacterial count, less viable count in boiled kitchen waste suggesting the lowering effect of cooking on viable count of bacteria.

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Mrs. Rita Mourya with Eminent Speakers, Guests, Training Attendees from Various Colleges

Mrs. Rita Mourya, Assistant Professor, Department of Pharmaceutical Chemistry, Faculty of Pharmacy, VNS Group of Institutions, Bhopal (MP) attended Training on “Learning Methodologies in Pharmaceutical Chemistry: Medicinal and Analytical Aspects” under UGC Networking Resource Centre from 5th August to 10th August, 2013. This training was organized by University Institute of Pharmaceutical Sciences (UIPS), Panjab University, Chandigarh. Programme was inaugurated by Prof. Harkishan Singh, Professor Emeritus, University Institute of Pharmaceutical Sciences. Eminent speakers from different organizations like IIT, Madras; IISER, Mohali; Daiichi Sankyo India Pharma Pvt. Ltd., Gurgaon; Shoolini University, Himachal Pradesh; IICT, Hyderabad etc. delivered their informative talks which were full of enriched content, knowledge, research methodologies and recent advancements in research. Prof. N. ChandraKumar, Indian Institute of Technology, Madras was the Chief Guest for Valedictory session.