



Drug Information Bulletin

Drug Information Centre (DIC)

Indian Pharmaceutical Association

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Editorial

Recent notification of Pharmacy Practice Regulation 2015 is a landmark in the history of Pharmaceutical Profession in India, which will certainly help in giving proper shape to the unorganized state of Pharmacy Practice in India. In the present regulation the Pharmacy Practice is well defined and the same has set up certain regulation to regulate the same. The document is available at <http://www.pci.nic.in/Circulars/Pharmacy%20Practice%20Regulations.pdf> .

Some of our professional demands have got legal approval through this regulation, which are-

1. Pharmacists are require to submit Code of Pharmaceutical Ethics and Pharmacists oath with signature for registration
2. Now "Dispensing" is well defined, which will help to ensure dispensing of medicines through Pharmacists
3. Refresher course is mandatory for renewal of registration
4. Pharmacists can charge for his service, in certain cases
5. Name qualification & photograph of pharmacist shall be displayed at a prominent place of the premises
6. Pharmacist require to comply with a dress code.....clean white overall with a badge displaying the name and registration number.
7. This regulation has given a structure of pharmacy cadres in different settings especially in case of hospital pharmacy, which will help in career growth
8. Punishment is well defined for misconduct by Pharmacists

It is felt that the Drugs and Cosmetics Act & Rule require to be amended suitably for proper implementation of this regulation. In spite of such a comprehensive regulation in place there are apprehensions from different quarters about proper implementation of the said regulation. We hope consorted efforts of all professional organizations will help in implementation of this regulation and giving a proper shape to the profession.

Dr. Subhash C. Mandal
Editor

New Drug: Axitinib

(Axitinib Tablet 1 mg & 5 mg approved by CDSCO for the "treatment of advanced renal cell carcinoma after failure of one prior systemic therapy" since 18.09.2014)

Aust Prescr 2012; 35:208-10

Approved indication: renal cell carcinoma
Inlyta (Pfizer)

1 mg and 5 mg tablets

Australian Medicines Handbook section
14.2.3

Axitinib is another addition to the group of tyrosine kinase inhibitors – [sorafenib](#), [sunitinib](#) and [pazopanib](#) – for renal cell carcinoma. Its anti-angiogenic effects stem from its inhibition of the vascular endothelial growth factor receptors 1, 2 and 3.

Early trials of axitinib in patients with refractory metastatic disease were promising.^{1,2} In a more recent open-label randomised phase III trial of 723 patients, axitinib (5 mg twice daily) was compared with sorafenib (400 mg twice daily). At enrolment, patients had progressive disease despite previous treatment with sunitinib, bevacizumab plus interferon alfa, temsirolimus or cytokines. Dose increases were allowed with axitinib (maximum 10 mg twice daily) but not with sorafenib. The patients who received axitinib survived for significantly longer without disease progression than those who received sorafenib (median of 6.7 months vs 4.7 months).³ However, overall median survival was similar between treatments (20.1 months vs 19.2 months).

The safety of axitinib seems to be comparable to sorafenib. Adverse reactions were very common, with over

half of the patients in the trial having their axitinib dose reduced or interrupted because of an event. Diarrhoea (55% of patients), hypertension (40%), fatigue (39%), decreased appetite (34%), nausea (32%), dysphonia (31%) and hand-foot syndrome (27%) were the most common. In the phase III trial, 16% of patients had a bleeding event and just over a third had anaemia. Conversely, 10% of patients had increased haemoglobin so monitoring this parameter is important. Thrombocytopenia (15%), lymphopenia (33%), creatinine elevation (55%), hypocalcaemia (39%) and lipase elevation (27%) were also common. Axitinib can affect thyroid (19.2% of patients had hypothyroidism) and liver function so these should be measured at baseline and regularly during treatment.

High blood pressure is a problem with axitinib and should be controlled with antihypertensives. In persistent cases, the axitinib dose may need to be reduced, or interrupted then restarted at a lower dose when blood pressure has normalised. Proteinuria occurs with axitinib (10.9% of patients) and should be monitored before and during treatment.

In the axitinib arm of the phase III trial, one patient died of a cerebrovascular accident and another of pulmonary embolism. Axitinib should be used with care in patients with a history of such events, particularly as they were excluded from the trial. There was also a death from gastric haemorrhage and axitinib should not be used in patients who have recently had gastric bleeding. Gastrointestinal perforation and fistulas have been reported with axitinib and patients should be monitored for symptoms during treatment.

One patient in the trial developed reversible posterior leukoencephalopathy syndrome. It can present with headache, seizure, lethargy, confusion, blindness and other neurological symptoms, with or without hypertension. Treatment should be stopped if this is suspected.

Following an oral dose of axitinib, peak plasma concentrations are reached within four hours and steady state is achieved after 2–3 days. Axitinib is metabolised in the liver and the dose should be reduced in patients with moderate hepatic impairment. Axitinib is excreted in the faeces and urine and caution is urged in patients with end-stage renal disease.

Axitinib is metabolised mainly by cytochrome P450 (CYP) 3A4, but also by CYP1A2, CYP2C19 and UGT1A1 so there is a potential for drug interactions. Concomitant use of strong CYP3A4 inhibitors (such as ketoconazole, clarithromycin, grapefruit juice) or inducers (such as rifampicin, carbamazepine, St John's wort) may affect axitinib concentrations. If these drugs cannot be avoided, adjustment of the axitinib dose is recommended.

The prognosis for patients with advanced renal cell carcinoma is poor. Axitinib provides another option for those who have relapsed despite previous treatment. Although it may temporarily reduce disease progression, it does not seem to prolong overall survival any more than sorafenib. It is not known how axitinib will compare to other treatments for this disease.

References:

1. Rixe O, Bukowski RM, Michaelson MD, Wilding G, Hudes GR, Bolte O, et al. Axitinib treatment in patients with cytokine-refractory metastatic renal-

cell cancer: a phase II study. *Lancet Oncol* 2007;8:975-84.

2. Rini BI, Wilding G, Hudes G, Stadler WM, Kim S, Tarazi J, et al. Phase II study of axitinib in sorafenib-refractory metastatic renal cell carcinoma. *J Clin Oncol* 2009;27:4462-8.
3. Rini BI, Escudier B, Tomczak P, Kaprin A, Szczylik C, Hutson TE, et al. Comparative effectiveness of axitinib versus sorafenib in advanced renal cell carcinoma (AXIS): a randomised phase 3 trial. *Lancet* 2011;378:1931-9.

Ref. Aust Prescr 2012; 35:208-10

Rajasthan to set up 3 drug testing labs, get ready for price monitoring in state

In order to enhance the capacity of sampling and testing of medicines in the state, three more drug testing laboratories will be established in Rajasthan at Udaipur, Jodhpur and Bikaner soon. The labs have been constructed and will now sooner be equipped with the state-of-the-art testing technologies and methods. Currently, there is only one drug testing laboratory in the state which is located at Jaipur.

For details:

<http://www.pharmabiz.com/NewsDetails.aspx?aid=88749&sid=1>

Excessive lead in Ayurvedic drugs causes dementia in 65-yr-old man

Maggi may be in a soup over its excess lead content. But a 65-year-old from Bengaluru has shown how lead can accumulate in the body from other sources too, like some ayurvedic drugs, and cause serious health hazards.

When the senior citizen was brought to a city hospital with signs of dementia,

doctors were shocked to find 150 microgram of lead per deci litre in his blood. It was 10 times above the limit of 15 mcg/dl and the reason for his neurological disorder.

Two of the seven ayurvedic drugs he was administered for five years had high lead content, resulting in its accumulation in his body.

The patient had been brought to St John's Medical College hospital with symptoms of memory loss, forgetfulness, mood swings, confusion, irritability and urge to run away from home. Investigation was done and the high blood-lead levels prompted doctors to enquire what other medication he was taking.

"He also suffers from cancer and diabetes for which he was taking ayurvedic medicines. We sent those medicines for testing. The results were shocking, as two of the seven drugs were high in lead content," said Dr GRK Sarma, head of the hospital's neurology department.

One of the drugs contained 5,000 ppm (parts per million) of lead whereas the other contained 10,000 ppm of lead, when the permissible limit is 25 ppm. The drugs were tested in National Referral Centre for Lead Poisoning in India (NRCLPI). However, doctors refused to reveal the drugs given, type of cancer and details of the doctor treating the patient.

'Not all contain lead': "This is quite surprising and unprecedented. Ayurvedic drugs are made up of metal ash (bhasma) and plant extract. It does not mean all ayurvedic products have lead," clarified DR Sarma. This case has been a shocker for Dr Tuppil Venkatesh, director NRCLPI, who tested the drugs.

"Even among labourers in the lead and automobile industry who are most exposed to lead, the blood lead levels will not be more than 30-35 microgram per deci litre. This case is shocking. Lead was present in the medicines he was taking," Dr Tuppil told TOI.

Source: The times of India

Forthcoming Event

Annual General Meeting of IPA, Bengal Branch

Date: 05.07.2015

Time: 5.00 pm

Venue:

IPA Auditorium, 22 B Panchanontola
Road, Kolkata-700029



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Venue: