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Abating the aches with NSAIDs: Aching matters for the heart

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The potential adverse cardiovascular events reported with selective COX-2 inhibitors (coxibs) led to the withdrawal of most blockbuster molecules viz. rofecoxib and valdecoxib from the market. Etoricoxib and nimesulide were never approved in many countries. The US FDA had decided, however that celecoxib should remain in the market after concluding that the benefits of celecoxib outweigh the potential risks. An increased risk of myocardial infarction has also been associated with the use of non-selective non-steroidal anti-inflammatory drugs (ns NSAIDs) such as diclofenac sodium and naproxen in some observational clinical and experimental studies. Subsequently, the FDA labeled all COX-2 selective and ns NSAIDs as increasing the cardiovascular risk and raised an alert for practitioners while treating patients with the established ischemic disease. The cardiovascular risk appears to be a class effect of coxibs and adverse events were also reported with celecoxib, leaving physicians in a dilemma for treating arthritic population at underlying risk of cardiovascular disease. The strategies to

mitigate the cardiovascular events appear to use the low doses of coxibs for short duration or concurrent administration of aspirin. However, most patients with arthritis require chronic therapy and it is unclear whether aspirin mitigates or abolishes NSAIDs-related risk. Alternate approaches may be to use nitric oxide donor NO-NSAIDs, dual COX/LOX inhibitors or anti-TNF therapy. Despite the unprecedented advances in drug discovery, it remains a major challenge for the pharma industry to discover aching remedies that don't ache the heart as well.

Speaker Biography

Kiran Dubey is currently associated with Jamia Hamdard as a Senior Assistant Professor in the Department of Pharmacology, School of Pharmaceutical Education and Research, New Delhi. She has also served in the Medical Information Department of Ranbaxy Laboratories, Systopic Laboratories, Dee Pharma Ltd and Skin Institute and School of Dermatology. Her areas of research include cardiovascular safety profile of NSAIDs, diabetes and related complications. She has guided twenty-six post graduate students and three Ph.D. students in the field of Pharmacology and Pharmacy Practice, published articles and has been reviewer for International and National journals of repute.

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