Vancouver CoastalHealth

BLEEDING RELATED PREVENTABLE ADVERSE DRUG EVENTS FOR HEALTHCARE PROVIDERS

In a recent study, bleeding was a common (12.5%) presentation of a preventable adverse drug event (pADE) causing hospital admission. This resource shares learning to support providers help patients avoid bleeding related pADEs[1].

1 Several patients had significant bleeding events who were taking NSAIDs (unknown to their healthcare provider), 1 elderly patient was taking an NSAID in addition to one dispensed in their blister pack.

When the patient is known to be taking an agent that can cause bleeding, any ONE of : (anticoagulants, NSAID, low dose ASA, ticagrelor, clopidogrel), exclude the possibility that the patient is taking additional unknown NSAID or low dose ASA – this requires careful questioning as not necessarily on PharmaNet.

► MANY PEOPLE MAY NOT RECOGNIZE THE TERM NSAID SO SEVERAL DIFFERENT QUESTIONS ARE SUGGESTED:

- "Do you take any medications for inflammation?"
- "Do you take any medications for pain?"
- "Do you take aspirin, Advil, Aleve, ibuprofen, naproxen or any other medications that you can buy without a prescription to treat headache, back pain or arthritis".
- "Do you take a daily aspirin, to prevent stroke or a heart attack?"

CONSIDER BLEEDING RISK FACTORS AND NEED FOR PRIMARY PREVENTION IF NSAID IS INDICATED

2 Several patients admitted with warfarin related bleeding had elevated INRs attributed to decreased oral intake.

Give a sick day management plan for patients taking warfarin, (or NSAIDs).

- Diarrhea or eating less than half of normal intake can have significant effect on INR – see sick day management advice on warfarin
- (Continued administration of NSAIDs while drinking less fluid can increase risk of acute kidney injury)

3 One patient's family, with patient taking new warfarin therapy, did not understand the need to get INR tested, had significant bleeding episode 21 days post hospital discharge. Many patients had signs of bleeding for many days before presentation, that they did not respond to.

Make sure the patient and competent family member can state what their "red flag symptoms" are and what they need to do about them and can confirm ability to go to lab for INR testing.

- If you notice blood in stool or black tarry stool call for MD appointment right away.
- If you feel faint or light headed go to the hospital right away or call 911.
- If you develop severe indigestion, for several days they should call MD for appointment

4 Most patients and families did not understand information that may have been provided by a healthcare provider.

Verify patient understanding of instructions and confirm competency of medication use and monitoring:

- Using the Teach-Back method (ask patient a question to get them to state what they need to do, why and how) Examples:

  1) "I just want to check that I have explained things clearly, can you tell me what are you going to do when you go home?"

  2) "What kind of red flag symptoms are you going to watch for?" and 3) "What will you do?"

5 A patient's renal function is subject to change during illness, this may require adjustment to DOACs or at least careful attention by the patient/ family to signs/ symptoms of bleeding:

- Thrombosis Canada has useful clinical tool that recommends dosage based on serum creatinine, age and weight and other factors: http://thrombosiscanada.ca/

IDENTIFY PRESENCE OF RISK FACTORS:

- Patients with 1 or more risk factors would be eligible for primary prevention if an NSAID is
- needed (e.g. with a PPI or Hp eradication)[2]
- If 3 or more risk factors present or patient has a recent ulcer, consider COX-2 inhibitor if (low CVrisk) with Hp eradication or PPI[2]
- Selective serotonin reuptake inhibitors (SSRIs) or aldosterone antagonists have emerged as new bleeding risk factors if taken with non-selective NSAIDs (but not if taken with low dose ASA)[3]
- Low dose ASA eliminates the gastrointestinal safety advantage of COX-2 inhibitors over traditional NSAIDs (requires addition of PPI)[2]

[Testing & Treatment of H.Pylori: Note that if starting chronic NSAID, if patient has ANY risk factor (even without a prior ulcer), testing & treating for H.pylori is recommended]

SELECTED KNOWN AND EMERGING BLEEDING RISK FACTORS RELATED TO NSAIDS:

KNOWN RISK FACTORS	OTHER CONSIDERATIONS
Age > 65 yrs	
History of uncomplicated ulcer	Consider testing & treat for H.pylori before NSAID treatment
Concurrent use of low dose ASA, anti-platelet, corticosteroid, or anticoagulant	Carefully question to identify low dose ASA use (may not be on PharmaNet)
POSSIBLE RISK FACTORS	**COMMENT**
Selective Serotonin Reuptake Inhibitors, Aldosterone antagonists	Increased risk with non-selective NSAIDs2 Increased risk with non-selective NSAIDs2

References:

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2. Lanza F.L., Chan F.K.L., Quigley E.M.M., Guidelines for the prevention of NSAID-related ulcer complications. Am J Gastroenterol 2009;104:728-738
3. Masclee G.M.C., Valkohff V.E., Coloma P.M., de Ridder M, Romio S, Schuemie M.J,, et al, Risk of upper gastrointestinal bleeding from different drug combinations. Gastroenterology 2014;147:784-792
4. www//UptoDate: Accessed Jan 2019. Primary prevention for NSAID (and ASA) related bleeding.

CONSIDER DURATION OF NSAID USE AND RELATIVE RISK OF BLEEDING OR CV RISK:

Patients taking indomethacin even for 1 week may require primary prophylaxis with a PPI[3]. Ibuprofen or naproxen may be less associated with bleeding than indomethacin but naproxen is considered to have a better CV risk profile[3].

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