Key Medications that Impact Nutrition

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Recognize certain oncology related medications that have an impact on nutrition.

Formulate an appropriate medical nutrition therapy plan for patients receiving these medications.
Brand name: Noxafil®

Class: Antifungal

Indications for use:
To prevent fungal infections in patients who are immunocompromised; To treat oral thrush.

Posaconazole
Per the Manufacturer:

To enhance the oral absorption of posaconazole and optimize plasma concentrations:

- Each dose of NOXAFIL should be administered during or immediately (i.e., within 20 minutes) following a full meal. In patients who cannot eat a full meal, each dose of NOXAFIL should be administered with a liquid nutritional supplement or an acidic carbonated beverage. For patients who cannot eat a full meal or tolerate an oral nutritional supplement or an acidic carbonated beverage, alternative antifungal therapy should be considered or patients should be monitored closely for breakthrough fungal infections.

Posaconazole
The Mean (%CV) [min-max] Posaconazole Pharmacokinetic Parameters Following Single-Dose Suspension Administration of 2 mg and 400 mg Under Fed and Fasted Conditions

<table>
<thead>
<tr>
<th>Dose (mg)</th>
<th>Cmax (ng/mL)</th>
<th>Tmax* (hr)</th>
<th>AUC (I) (ng·hr/mL)</th>
<th>CL/F (L/hr)</th>
<th>t½ (hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 mg fasted (n=20)‡</td>
<td>132 (50) [45-267]</td>
<td>3.50 [1.5-36†]</td>
<td>4179 (31) [2705-7269]</td>
<td>51 (25) [28-74]</td>
<td>23.5 (25) [15.3-33.7]</td>
</tr>
<tr>
<td>200 mg nonfat (n=20)‡</td>
<td>378 (43) [131-834]</td>
<td>4 [3-5]</td>
<td>10,753 (35) [4579-17,092]</td>
<td>21 (39) [12-44]</td>
<td>22.2 (18) [17.4-28.7]</td>
</tr>
<tr>
<td>200 mg high fat (54 gm fat) (n=20)‡</td>
<td>512 (34) [241-1016]</td>
<td>5 [4-5]</td>
<td>15,059 (26) [10,341-24,476]</td>
<td>14 (24) [8.2-19]</td>
<td>23.0 (19) [17.2-33.4]</td>
</tr>
<tr>
<td>400 mg fasted (n=23)§</td>
<td>121 (75) [27-366]</td>
<td>4 [2-12]</td>
<td>5258 (48) [2834-9567]</td>
<td>91 (40) [42-141]</td>
<td>27.3 (26) [16.8-38.9]</td>
</tr>
<tr>
<td>400 mg with liquid nutritional supplement (14 gm fat) (n=23)§</td>
<td>355 (43) [145-720]</td>
<td>5 [4-8]</td>
<td>11,295 (40) [3865-20,592]</td>
<td>43 (56) [19-103]</td>
<td>26.0 (19) [18.2-35.0]</td>
</tr>
</tbody>
</table>

- Median [min-max]
- † The subject with Tmax of 36 hrs had relatively constant plasma levels over 36 hrs (1.7 ng/mL max difference between 4 hrs and 36 hrs).
- ‡ n=15 for AUC (I), CL/F, and t½
- § n=10 for AUC (I), CL/F, and t½
Oral supplements:

* Benecalorie® 1.5 ounce serving = 33g fat
* Boost® VHC 1 carton = 30g fat
* Ensure Plus 1 bottle = 11g fat
  + ½ cup ice cream = 17g total fat

Posaconazole
Fat content of foods:

* 2 Tbsp peanut butter = 16g fat
* 3 scrambled eggs = 15g fat
* 1 cup whole milk = 8g fat
* 1 Tbsp butter = 11.5g fat
* 1 Tbsp mayonnaise = 10g fat

Posaconazole
What about with Tube Feeds?

*Benecalorie® 1.5 ounce serving = 33g fat

Posaconazole
Brand name: Matulane®

Class/Category:
Antineoplastic Agent,
Alkylating Agent

Indications for use: Hodgkins disease

Procarbazine
Acts as MAO inhibitor

Drug Nutrient interaction: Tyramine

Procarbazine
Per the Manufacturer:

- “Concurrent ingestion of foods rich in tyramine may cause sudden and severe high blood pressure (hypertensive crisis or serotonin syndrome). Management: Avoid tyramine-containing foods....”

Procarbazine
High Tyramine foods:

- Aged cheeses
- Cured meats: pepperoni, salami, sausages
- Beer & Wine
- Liver
- Peanut butter, peanuts, pecans, walnuts
- Snow peas
- Pickles, olives
- Sauerkraut
- Soy Sauce
- Yogurt
- Limit caffeinated beverages
- Limit chocolate

Procarbazine
Brand name: Eloxatin®

Class/Category: Antineoplastic Agent

Indications for use: Advanced colon or rectal cancer

Oxaliplatin
Per the manufacturer:

- “Patients should be informed that the acute neurosensory toxicity may be precipitated or exacerbated by exposure to cold or cold objects. Patients should be instructed to avoid cold drinks, use of ice, and should cover exposed skin prior to exposure to cold temperature or cold objects.”

Oxaliplatin
It is recommended to avoid “the cold” for at least 5 days after administration.

Oxaliplatin
Things to keep in mind:

* Be mindful of neutropenic diets
* Serve foods & beverages that are shelf stable at room temperature
* Hot or warm beverages

Oxaliplatin
Marion, DW. Posaconazole. In: UpToDate, Basow, DS (Ed), UpToDate, Waltham, MA, 2013.

HIGHLIGHTS OF PRESCRIBING INFORMATION. These highlights do not include all the information needed to use NOXAFIL ORAL SUSPENSION safely and effectively. See full prescribing information for NOXAFIL ORAL SUSPENSION. NOXAFIL® (Posaconazole) ORAL SUSPENSION 40 mg/mL. Initial U.S. Approval: 2006. Last revised: 12/2012


References

Marion, DW. Procarbazine. In: UpToDate, Basow, DS (Ed), UpToDate, Waltham, MA, 2013.


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Marion, DW. Oxaliplatin. In: UpToDate, Basow, DS (Ed), UpToDate, Waltham, MA, 2013.


References