WHAT’S HOT AND WHAT’S NOT:
New Pharmacology Update

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Learning Objectives:
● Differentiate the use of medications as to being preventative or for treatment.
● Review of new medications, both unique and reformulations, and how they are extrapolated into use for the older patient, especially over 85 years old.
● List comorbid conditions that are affected by new medications on the market and how risk/benefit should be addressed.

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What’s Hot and What’s Not
Pharmacology update

Objectives

• Describe new products entering the market place for the elderly patient
• Identify the positive and negative aspects of the new drugs on the market
• Discuss changes in drug placement according to classifications with controlled substances changes.
• List the high risk medication monitored by CMS

What’s in the News

• Hepatitis C therapy
• Pneumococcal Vaccine
• New psychotropic classification
• Pain Management
Hepatitis C

- Sovaldi (Sofosbuvir)
- Olyseo (Simeprevir)
- Harvoni (Sofosbuvir + Ledipasvir)
- Abbvie product with no name
- Combination of sovaldi + Olyseo
- More to come

Goals of therapy

- Interferon is to increase the bodies immune system to fight off the virus.
- Pegasys (peginterferon) once weekly injection, many side effects
- Old therapy hope to get 50% cure rate. Using pegasys, ribavirin and Incivik or vectrelis (other high cost therapy)
- Incivik or vectrelis and the new therapy are direct antiviral products.
- Combination therapy thought to increase cure rate.

Eradication of Hepatitis C

- 3.2 million americans with Hepatitis C – Many are unaware
- Contracted through blood contamination _ sharing needles IV drugsabuse
- Contracted also by Tattoos with contaminated needles
- Larges concentration of Patients in prison system and Medicaid recipients
- New multiple therapy “cocktails” high success rate of eradication
Why the discussion around this drug

- 3rd quarter sales of sovaldi 2.69 billion
- Total cost to treat everyone 269 billion
- Majority on Medicaid or in prisons – break the system financially
- Sparked debate of cost of specialty drugs
- India less than $800 for treatment
- 84,000 for Sovaldi therapy (1000/tablet) 12-24 week therapy
- Insurance guidelines making news too! “must be sicker to get the therapy”

Treatment guidelines

- Triple therapy: Sovaldi, Ribavirin, Peginterferon x 12 weeks
- Dual Therapy: Sovaldi, Ribavirin (if peginterferon ineligible) x 24 weeks
- Dual Therapy: Sovaldi, Olyseo x 12 weeks (peginterferon/ribavirin ineligible) $30,000
- New therapy 85-90% “cure” = undetectable viral load
- Adherence and compliance essential
- Future will be interesting

Pneumococcal Vaccine

- New guidelines for aged over 50 years old
- 13-valent conjugate vaccine for pneumococcal pneumonia
- Usually thought to be given every 5 years and depending on the age or if poor history given more frequently.
- Suggestion to give with flu vaccine every year to ensure tracking
- Old vaccine did not have as many strains as the new vaccine has
- Better coverage
New Psychotropic classification

• Presented this past summer at the European College of Neuropsychopharmacology (ECNP) (in association with United States organization.
• Changing from symptom based (antidepressant) to Pharmacology based therapy (SSRI)
• 4 Axis
• Goal is to help patients understand with less stigma ????

4 Axis

• Axis 1 Description of pharmacologic target and mode of action
• Axis 2 Indication/ what the drug is used for
• Axis 3 Description of efficacy and major side effects
• Axis 4 Neurobiologic description

Example of 4 Axis descriptions - Fluoxetine

• Axis 1 Target: Serotonin Mechanism of Action: reuptake inhibitor
• Axis 2 Major Depressive Disorder, OCD, Bulimia, Panic disorder, others
• Axis 3 Improves symptoms of depression and anxiety and reduces compulsive behavior. Side effects sexual dysfunction, gastrointestinal symptoms etc
• Axis 4 neurotransmitter actions/ physiologic
Changes in Pain Management

- Reclassification of Tramadol and Hydrocodone products
  - Tramadol – now Controlled Substance class IV
    - Tramadol increases opioid cravings if drug abuse is an issue
    - Tramadol increases serotonin and should be used with caution with SSRI

- Vicoden – Hydrocodone/APAP
  - APAP only 300mg or 325mg
  - Now a controlled substance class II
  - Requires Hard copy and follow rules similar to oxycodone and morphine RXs

New Pain Control medication

- Zohydro ER
- Targiniq ER (oxycodone/Naloxone)
- Xartemis Xr (oxycodone/apap XR)
- Methadone as alternative in the elderly
  - Movantik (naloxegol)

Zohydro Extended Release

- Hydrocodone Bitartrate 10,15,20,30,40,50mg Capsule
- Not to be used PRN
- Q12 hour dosing
- Black Box Warning
- Start with 10mg q12 then increase in 10mg increments q3-7 days
- Capsules must be swallowed intact Not to be cut or opened.
Targiniq ER

- Oxycodone and Naloxone Extended Release
- Purdue Pharma (oxycotin)
- Abuse Deterrent properties
- Naloxone activated if crushed or chewed
- Similar to talwin and suboxone (naloxone property)
- Not sure if it is on the market currently
- Not to exceed 40mg/20mg doses q12h
- Comes in 5, 10, 20 and 40mg doses

Xartemis XR

- Long acting oxycodone / apap combination
- Tylenol issue – max 3000mg / day in elderly
- For acute pain management
  - used to treat pain that is not expected to last a long time but painful enough to need this type of medicine.
  - 7.5mg/325mg
  - 2 tablets q12h
  - Q12 hour dosing!!

Movantik (naloxegol)

- Indicated for opioid induced constipation
- Antagonist of opioid binding at the Mu-opioid receptor.
- Binds in the peripherally acting receptor
- Derivative of naloxone
- Withdrawal symptoms
- Little penetration into the CNS
Infectious Disease

- Super bug concern
- Orbactiv (oritavancin)
- Sivextro (Tedizolid)
- Dalvance (Dalbavancin)

Orbactiv (oritavancin)

- Bacterial skin infection
  - Staph aureus (including MRSA)
  - Streptococcus
  - Enterococcus faecalis (vanco sensitive only)
- In studies single dose non inferior to vanco bid
- IV admin over 3 hours
- Lipoglycopeptide inhibits cell wall to lead to cell death
- Vanco vs Orbactiv?? Both IV one 90 minutes vs 3 hours infusion

Sivextro (tedizolid)

- Acute bacterial skin and skin structure infections
- Administered daily either IV or PO
- Used for MRSA or VRE
  - 200mg daily
  - 6 days treatment
Dalvance (dalbavancin)

- Acute bacterial skin infections
- Vanco like drug
- ½ life is 5-6 days
- Dosed weekly
- 1gm 1st week then followed by 500mg 2nd week
- IV or IM dosing
  Gram positive organisms

Diabetes

- Invokana (canagliflozin)
- Invokamet (canagliflozin and metformin)
- Jardiance (empagliflozin)
- Farxiga (dapagliflozin)
- Xigduo XR (dapagliflozin and metformin)
  - Tanzeum (albiglutide)
  - Trulicity (dulaglutide)

SGLT2 inhibitor (sodium-glucose linked transporter)

- Glucose transporter found in the proximal tubule of the nephron.
- Work on renal reabsorption
- The drug inhibits that reabsorption and the glucose is renally excreted.
- Numerous products approved in the last year.
- All have similar side effect profile: hypotension, UTI, Mycotic infections,
Invokana and Invokamet

- SGLT2 and Biguanide
- Diabetes Type 2
- 100mg qd to start, may increase to 300mg/day
- Reduce dose for renal impairment
- Do not use with GFR less than 45
- Hypotension side effect
- High glucose in urine, watch for hypokalemia
- Metformin added to invokamet
- Dosing cross walk in package insert depending on current dose of both metformin and invokana – 4 doses to choose.

Jardiance (empagliflozin)

- Type 2 diabetes
- 10mg qam
- May increase to 25mg/day

Farxiga and Xigduo XR (dapagliflozin)

- Farxiga (dapagliflozin)
  - 5mg /day may increase to 10mg
  - Similar to other agents
  - Do not use in renal impairment (gfr <60)

- Xigduo XR (dapagliflozin and metformin)
  - 5mg/850 and 5mg/1000mg used BID
Tanzeum (albiglutide)

- Glucagon like peptide 1 (GLP-1)
- Receptor agonist
- DM2
- Weekly injection

Trulicity (dulaglutide)

- GLP-1 receptor agonist
- Black box warning – risk of thyroid C-cell tumor
- 0.75mg weekly may increase to 1.5mg
- Risk of pancreatitis
- Hypoglycemia

Last of the new drugs!!

- Contrave (bupropion / naltrexone)
- Chronic weight management
- Black box warning regarding suicide thoughts
  - Avoid in chronic opioid users; ***
- Avoid patients with seizure disorders
- Avoid in hypertension
- May cause hepatotoxicity?
Finally HRM (high risk Medication) - STARS

- Medicare “grading” insurance companies
- Beer’s list
- High risk medications monitored and “graded” into STARS
- Examples: amphetamines, analgesics (indomethacin and ketorolac)
- Antianxiety, antiemetics (tigan and Phenergan) Antihistamines, Cogentin, trihexyphenidyl, mellaril, barbiturates, sedative hypnotics, skeletal muscle relaxants, tricyclic antidepressants, vasodilators
- Most have been removed from Med D formularies.
- Be aware and try not to use these products unless all other meds have been tried.

Questions?

- Thanks!
- Have a super fantastic rest of the weekend!!