During which the rate of death in drug-treated patients was of 1.6 to 1.7 times that seen in placebo-treated patients was (Zyprexa), quetiapine (Seroquel), and aripiprazole (Abilify). ifs were performed with risperidone (Risperdal), olanzapine patients with dementia-related behavioral disorders. The tri-placebo-controlled trials that enrolled a total of 5106 elderly indication. of all the atypical antipsychotics from all chemical classes, suggesting that the effect is likely related to the common pharmacologic effects of all the atypicals, even those not studied in the de-mentia population. And, since limited data also suggest a similar increase in mortality for the older antipsychotics, the FDA is considering adding a warning to the labeling of these as well. This review of the older drugs is still on-going.

In an attempt to put these new warnings into context, one must first consider the population in question. In the studies re-antipsychotic treatment targeted towards behavioral symptoms related to dementia (including delusions, hallucinations, agita-tion, and aggression, among others). The age range represents a population already inherently predisposed to certain risk factors for cardiac and infectious conditions. The risk factors for cardiac death include, but are not limited to, ischemic cerebrovascular and cardiovascular disease, hypertension, arhythmias, dia-betes mellitus, heart failure, hypercholesterolemia, smoking, and alcohol abuse. Meanwhile, the risk factors for infectious conditions such as pneumonia include decreased cognition and aspiration risk. In such a population, it becomes more difficult to accurately identify one absolute cause of death.

Another point to consider is the current lack of good support for alternative means of treatment for behavioral symptoms related to dementia. Ideally, after an assessment of potential medical and environmental causes of the behavioral symptoms has been completed and addressed if necessary, non-pharma-co logical interventions should be implemented before phar-macologic ones. Several small studies have shown some success with various behavioral therapies such as music, pet, and aromatherapies. But once the decision is made to progress to pharmacologic interventions, an assessment of other drug treatment options should be completed.

Such a review was recently published, which encompassed data from other reviews as well as randomized controlled trials available not only for typical and atypical antipsychotics, but also for antidepressants, mood stabilizers, cholinesterase in-hibitors, memantine, and IM lorazepam. Some of the conclu-sions that the authors of this review made were that only the atypical antipsychotics (risperidone and olanzapine were assessed) have relatively convincing evidence of efficacy for neuropsychiatric symptoms (although the effect sizes have not been substantially great), and that the cholinesterase inhibitors (including...
Medication Assistance Programs: A Long Range Perspective

Over the past 7 years, Alameda County Behavioral Health Care Services has become a leader in the use of psychotropic prescription assistance programs (PAPs). In turn, our knowledge of these programs has led to advocating the needs of our indigent population to the drug companies as well as describing better user-friendly features. These discussions continue to this day and include: how can these programs help our most needy clients, while cutting down on the repetitive paper work required to both enroll and document a client’s financial status? How can we better use technology to reduce the lag time and ensure information security? And how can we keep these programs viable over the long run?

In 2004, we saved $387,000 through these programs, down from $510,000 in 2003. This drop in PAP use can be attributed to several factors, including:

- Paper application (exception: IVAX & Lilly web-based programs)
- Complicated application process: especially client financials & signature requirements (exception: IVAX clozapine program)
- Short program eligibility window
- Increased BHCS staff responsibilities & re-prioritization

Unfortunately, over the past few years the percentage of prescriptions covered through manufacturers’ medication assistance programs has dropped to currently 13%, from a high of 20% in 2002.

The most successful programs have unique features that make them ideal: IVAX Pharmaceutical’s clozapine program & AstraZeneca’s (now defunct) bulk replacement program for Seroquel. The IVAX program was ideal due to two features: ease of use due to online application, and no inclusion of the client’s financial status. In other words, any County-determined indigent client was also considered indigent by the IVAX program. This led to a very successful program which covered 77% of all indigent prescriptions for this drug. Bulk replacement is another excellent option for a PAP, although none currently operate in this efficient manner.
In light of the continued staff dedication and success with these complex programs, the BHCS Financial Rewards Program, now in its 4th year, recognizes clinics based on their efforts with these PAPs. For the 2005 Program, BHCS Administration has presently allocated $75,000 and hopes to increase this figure to $125,000 after the budgeting process is complete.

Financial rewards are based on the percentage of that clinic’s savings and are provided to that clinic for patient care use. Site/staffing size, indigent caseload size or the size of the total medication expenditure has no relevance to the amount of the financial reward earned since it is solely based on the percentage of cost savings generated.

A special congratulations goes out to the first place clinic, Asian Community Mental Health (ACMH) and specifically Quyen Thai who has headed up their efforts for the past 6 years. Under Quyen’s watchful coordination, ACMH has been top ranked every year, with more approved applications and prescriptions than any other participating BHCS Program. Quyen: thank you for all your hard work!!

Medication Monitoring

The Medication Monitoring Program was initiated in 1999 at Alameda County BHCS primarily as a means to measure adherence to BHCS Practice Guidelines, which are continually updated by our Psychiatric Practices Committee. The Program’s utility, however, as a pre-emptive strike against findings of inadequacy by California state auditors (and thus potential decreases in revenue) became more apparent as time progressed.

As part of the Medication Monitoring Program, 15% of each psychiatrist’s patient caseload is reviewed for adherence to BHCS Practice Guidelines. The charts to be reviewed are randomly chosen from a list of all patients seen for Medication Management visits during the past month.

Results from a full year of Medication Monitoring beginning in January 2004 were assessed. Bearing in mind that no Medication Monitoring was done during the latter half of 2003, generally the rates of compliance to certain aspects of the BHCS Practice Guidelines seem to have fallen during 2004. Slight improvements have been noted between June and December 2004; however, the overall 2004 annual trends are as follows (relative to June 2003):

- Informed consent forms and Med Regimen Log Sheets were completed less frequently
- Rationale for combination antipsychotics was documented less frequently
- Mood stabilizer serum levels were not appropriately assessed as frequently
- Rationale for combination anxiolytic agents was documented less frequently

However, what we found to be particularly encouraging was that there was an increase in the frequency with which weights, blood glucoses, and lipids were assessed during 2004. Thank you for recognizing the importance of monitoring metabolic parameters when prescribing antipsychotics.
Discerned. The length of these trials averaged about 10 weeks, and as a result, an increased risk of death in drug-treated patients on the order of 2.6% in the placebo group. The causes of death were varied, though in most cases the deaths appeared to be due to cardiovascular (e.g., heart failure, sudden death) or infectious (e.g., pneumonia) issues.

Additionally, although the analyses were conducted based upon trials of the four antipsychotics listed above, the request for labeling change will extend to all the currently marketed antipsychotics, including clozapine (Clozaril) and ziprasidone (Geodon), as well as to the olanzapine-fluoxetine combination (Symbyax). The rationale for this is based upon findings within the analyses that the increase in mortality was consistent among atypical antipsychotics from all chemical classes, suggesting that the effect is likely related to the common pharmacologic effects of all the antypicals, even those not studied in the dementia population. And, since limited data also suggest a similar increase in mortality for the older antipsychotics, the FDA is considering adding a warning to the labeling of these as well. This review of the older drugs is still on-going.

In an attempt to put these new warnings into context, one must first consider the population in question. In the studies of antipsychotic treatment targeted towards behavioral symptoms related to dementia (including delusions, hallucinations, agitation, and aggression, among others), the age range represents a population already inherently predisposed to certain risk factors for cardiac and infectious conditions. The risk factors for cardiac death include, but are not limited to, ischemic cerebrovascular and cardiovascular disease, hypertension, arthritism, diabetes mellitus, heart failure, hypercholesterolemia, smoking, and alcohol abuse. Meanwhile, the risk factors for infectious conditions such as pneumonia include decreased cognition and aspiration risk. In such a population, it becomes more difficult to accurately identify one absolute cause of death.

Another point to consider is the current lack of good support for alternative means of treatment for behavioral symptoms related to dementia. Ideally, after an assessment of potential medical and environmental causes of the behavioral symptoms has been completed and addressed if necessary, non-pharmacologic interventions should be implemented before pharmacologic ones. Several small studies have shown some success with various behavioral therapies such as music, pet, and aromatherapies. But once the decision is made to progress to pharmacologic interventions, an assessment of other drug treatment options should be completed.

When hoarded and taken as an overdose, tricyclic antidepressants such as amitriptyline, desipramine etc. are lethal seemingly as an adjuvant to gabapentin abuse. In addition to the abuse potential, the sustained bupropion SR formulation (Wellbutrin SR) and the tricyclic antidepressants (amitriptyline, nor- triptyline, desipramine etc.) are highly lethal. Reportedly, only the sustained release (SR) form of bupropion was crushed and snorted, seemingly as an adjuvant to gabapentin abuse. In addition to their sedative properties, tricyclic antidepressants are lethal when hoarded and taken as an overdose.

Indeed, widespread abuse of psychiatric medications is evident throughout City, County, State and Federal correctional facilities. It also became evident that a multitude of factors keep most facilities from restricting these abused medications: inmate grievances, ignorance on the practitioner’s part, and again, the lack of any published information.

In our Santa Rita facility, we set about reversing this trend. A criminal justice-specific Therapeutics & Medication Use Committee was established in March 2004, and began meeting every 6 weeks. A frank discussion with our MDs revealed that they were well aware of the burgeoning abuse problem: each had stories revealing inmate malingering and sociopathy. In addition, they described the targeting of chronically mentally ill inmates by other inmates based upon their prescribed psychotropic medication regimens.

Psychotropic medication abuse was presented, case studies reviewed and specific issues addressed at these meetings. In a 2-part process (June & August 2004), five drugs/class of medications were removed from the jail formulary (quetiapine, olanzapine, bupropion SR, trihexyphenidyl & TCAs).

Through education and formulary changes, a harm reduction model was successfully implemented at Santa Rita Jail. In addition, the manufacturer acknowledgement came in 2004. Later, the manufacturer acknowledged the abuse potential. The manufacturer acknowledged the abuse potential. However, the manufacturer acknowledged the abuse potential. In an attempt to put these new warnings into context, one must first consider the population in question. In the studies of antipsychotic treatment targeted towards behavioral symptoms related to dementia (including delusions, hallucinations, agitation, and aggression, among others), the age range represents a population already inherently predisposed to certain risk factors for cardiac and infectious conditions. The risk factors for cardiac death include, but are not limited to, ischemic cerebrovascular and cardiovascular disease, hypertension, arthritism, diabetes mellitus, heart failure, hypercholesterolemia, smoking, and alcohol abuse. Meanwhile, the risk factors for infectious conditions such as pneumonia include decreased cognition and aspiration risk. In such a population, it becomes more difficult to accurately identify one absolute cause of death.

Furthermore, a clinical pharmacist was hired to both support and review medication prescribing using our BHCS Psychotropic Medication Practice Guidelines specifically in the County Jail. As a result, medication abuse case reports, usage and costs dropped significantly within a 3-month period.

Psychotropic medication costs rose steadily from $211,000 in 1996 to $1.5 million in 2003. By far the most costly medication component was the antipsychotic quetiapine, available as 25, 100, 200 and 300mg strengths. In addition to the abuse mentioned previously, this agent was also priced due to multiple tablet dosing (usual therapeutic doses range from 400-800mg, dosed twice daily) and availability. Conversations between this author and Astra-Zeneca, the manufacturer of quetiapine, initially revealed no acknowledgement of the abuse potential. Later, the manufacturer acknowledged the abuse potential. The manufacturer acknowledged the abuse potential. However, the manufacturer acknowledged the abuse potential.

Coupling this dangerous abuse and barter with economics, it became clear from our own County jail that this abuse was financially costly. Additionally, fewer patients than anticipated were switched to other drugs in the same class. Physicians reported excellent inmate acceptance with the policy and no grievances were filed in opposition to the changes. In addition, for the first time in almost a decade, psychotropic medication costs dropped by the close of 2004.

Alameda County Behavioral Health Care Services: Annual Criminal Justice Medication Costs

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Inpatient Costs</th>
<th>Total Outpatient Costs</th>
<th>Total Prescription Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>$702,011</td>
<td>$375,011</td>
<td>$2,184,000</td>
</tr>
<tr>
<td>2000</td>
<td>$976,011</td>
<td>$454,011</td>
<td>$3,049,000</td>
</tr>
<tr>
<td>2001</td>
<td>$1,104,011</td>
<td>$587,011</td>
<td>$3,247,000</td>
</tr>
<tr>
<td>2002</td>
<td>$1,145,142</td>
<td>$658,142</td>
<td>$3,286,142</td>
</tr>
<tr>
<td>2003</td>
<td>$1,548,000</td>
<td>$770,000</td>
<td>$3,322,865</td>
</tr>
</tbody>
</table>

Psychotropic Medication Abuse continued from page 1

In conversations with peers in facilities state-wide and across the US, it was noted that psychotropic medication abuse has a widespread impact on inmate safety as well as larger economic repercussions. Medications repeatedly named were quetiapine, olanzapine (Zyprexa), gabapentin, bupropion SR formulation (Wellbutrin SR), trihexyphenidyl (Artane) and the tricyclic antidepressants (amitriptyline, nor-tripryline, desipramine etc.). Reportedly, only the sustained release (SR) form of bupropion was crushed and snorted, seemingly as an adjuvant to gabapentin abuse. In addition to their sedative properties, tricyclic antidepressants are lethal when hoarded and taken as an overdose.

Interviews with correctional facilities revealed psychoactive medications commonly bartered and abused in the jail setting. Through education and formulary changes, a harm reduction model was successfully implemented at Santa Rita Jail. In addition, medication abuse case reports, usage and costs dropped significantly within a 3-month period.

Psychotropic medication costs rose steadily from $211,000 in 1996 to $1.5 million in 2003. By far the most costly medication component was the antipsychotic quetiapine, available as 25, 100, 200 and 300mg strengths. In addition to the abuse mentioned previously, this agent was also priced due to multiple tablet dosing (usual therapeutic doses range from 400-800mg, dosed twice daily) and availability. Conversations between this author and Astra-Zeneca, the manufacturer of quetiapine, initially revealed no acknowledgement of the abuse potential. Later, the manufacturer acknowledged the abuse potential. The manufacturer acknowledged the abuse potential. However, the manufacturer acknowledged the abuse potential.

Coupling this dangerous abuse and barter with economics, it became clear from our own County jail that this abuse was financially costly. Additionally, fewer patients than anticipated were switched to other drugs in the same class. Physicians reported excellent inmate acceptance with the policy and no grievances were filed in opposition to the changes. In addition, for the first time in almost a decade, psychotropic medication costs dropped by the close of 2004.
Atypical Antipsychotics & Increased Mortality

continued from page 2

donepezil, rivastigmine, and galantamine) have had fairly consistent but small positive effects. The remaining treatment agents mentioned above were either lacking in support for efficacy or had more inconsistent results. Given such a lack of good data supporting any one treatment modality or agent, and the increased risk of mortality with off-label use, it is especially important to complete a risk to benefit assessment for each individual patient for whom atypical antipsychotic therapy is being considered. However, this assessment should include not only the increased risk of mortality, but also the risk to the patient and the patient’s caregiver of non-treatment or inadequate treatment. The latter must incorporate the patient’s quality of life, nursing home placement, caregiver burden, depression, and potential loss of employment/income.

Until more evidence arises supporting the use of other therapies over the atypical antipsychotics, the atypicals represent the class of agents that has so far garnered the most data supporting its efficacy in treating the behavioral symptoms of dementia. Nonetheless, all risks and benefits of prescribing atypicals must be considered for each individual case, taking into account risk factors for death due to cardiac-related disorders or infections. In addition, patients should be regularly reassessed for appropriateness of continuation of antipsychotic therapy. Once the behavioral symptoms associated with dementia have abated, and when clinically indicated, a trial off of antipsychotic medication should be attempted. Evidence suggests that even after discontinuation of the antipsychotic, many patients’ behavior will continue to remain stable.

References available upon request.

Bay Area Psychopharmacology Newsletter

Editor:
Douglas Del Paggio, PharmD, MPA
2000 Embarcadero Cove, Suite 400
Oakland, California 94606-5300
(510) 567-8110 FAX (510) 567-6850
email: delpaggio@bhcs.mail.co.alameda.ca.us

Contributors:
Douglas Del Paggio, PharmD, MPA
Alice Myong-Chenung, PharmD
Alameda County Behavior Health Care Services
Mary Ann Sullivan, PharmD
Rene Spencer, MA, PhD
Aaron Chapman, MD
San Francisco Community Behavioral Health Services
Barbara Liang-Krukar, PharmD
Cola Moreno, MD
San Mateo County Mental Health Services
Majid Talebi, PharmD
Santa Clara County Mental Health Services
Talia Putnamim, PharmD
University of California San Francisco

Graphic Designer: Janie Chambers

The Bay Area Psychopharmacology Newsletter is now available on the Alameda County Behavioral Health Care Services website:
https://bhcs.co.alameda.ca.us/Ander Quick Links.

This Newsletter is supported by charitable contributions from the following companies, which have no control over its content:

Lilly

Bay Area Psychopharmacology Newsletter

Volume 8, Issue 2 June 2005

Psychotropic Medication Abuse in Correctional Facilities

Douglas Del Paggio, PharmD, MPA

A little over two years ago, I noted a sudden surge in the prescribing of quetiapine (Seroquel) in our County jail facility (Santa Rita Jail, inmate population ~ 4,000). Over a 3 month period, the number of quetiapine tablets dispensed surpassed that of all other antipsychotic medication tablets, combined. This was a four-fold increase in prescribing, although no obvious changes had occurred in regards to staffing or psychiatrist medication preference. Something was up…and needed to be investigated…

Correctional settings have a convergence of factors that may predispose that particular setting to abuse of available medications. As State hospitals have all but disappeared, a greater proportion of the chronically mentally ill now reside in our correctional facilities. As many as 20% of the 2.1 million Americans in County jails and State prisons are seriously mentally ill, the literature is sparse regarding the abuse of other psychotropic medications, especially in the correctional setting. Luckily, some recently published case reports regarding abuse of both gabapentin and quetiapine have begun to bridge this void. Reccoppa et al. provided case reports of gabapentin (Neurontin) powder intranasally abused by inmates with a prior history of cocaine dependence in the Florida State Department of Corrections, which eventually led to formulation removal. These inmates described obtaining an altered mental state or high from snorting the gabapentin powder.

Although we have been aware of the misuse of anticholinergic agents (benzztropine, trihexyphenidyl) by the seriously mentally ill, the literature is sparse regarding the abuse of other psychotropic medications, especially in the correctional setting. Pierre et al. published a Letter to the Editor this past fall in the American Journal of Psychiatry describing widespread "abuse" of quetiapine (Seroquel) among inmates in the Los Angeles County Jail. In addition to oral administration, it is snorted in its pulverized powder form, primarily for its sedative and anxiolytic properties. The authors concluded "while antipsychotic medications are not typically recognized as drugs with abuse potential, the use of intranasal quetiapine suggests otherwise, and underscores the importance of recognizing malingered psychosis in clinical settings." In other correctional facilities in California, inmates refer to quetiapine as "baby heroin."