

News LETTER



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Message from the President

Time has flown by since the ISOPP IX Symposium in Torino, but it is still gratifying to receive nice comments from delegates about the scientific programme, organisation and the hospitality of our Italian hosts. However, ISOPP must move on and already planning for the ISOPP X Symposium has begun. We also need to move forward with changes to our Rules and our membership fee structure to enable more pharmacists who share our passion for oncology to join with us and to enable the Society to offer yet more benefits to its members. On that note, I am particularly delighted to welcome in this Newsletter, our first ISOPP member from India.

In the coming weeks, I will send out a very short "Questionnaire from the President" to seek views and information from each ISOPP member. I promise this will take only a few moments to complete and would ask everyone to complete and return their questionnaire to ensure that the Secretariat is fully informed in its efforts to make

ISOPP even better.

As always, I would like to encourage all members to visit the website often, support the ISOPP committees and to watch out for announcements of training and research grants over the next three months. More experienced practitioners should also consider applying for the ISOPP Fellowship award.

I am always pleased to hear from members and receive their views and comments. So, please get in touch !

With Best Wishes

Graham Sewell, ISOPP President



CHECK OUT THE ISOPP WEBSITE TODAY
www.isopp.org

Find out more about mucositis, bortezomib stability, carboplatin in hemodialysis patients. Look up colleagues contact information, see presentation information from ISOPP IX, and get links for Medication Error Guidelines.

All this and More is available on the ISOPP website

problem-based learning with case studies, we want to develop both a beginner and advanced clinical course for our members. We do not want to leave out our manufacturing and distributive colleagues, so please please feel free to send your suggestions to our committee. We want to accommodate the entire membership of ISOPP in their educational endeavors!

We look forward to hearing from you soon,
Helen
Chair, ISOPP Education Committee

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Education Committee Report

The Education Committee has recently reformed, and the "active" members of this committee include: Franca Goffredo (Italy), Hannelore Kreckel (Germany), Dominic Solimando Jr (USA), Jill Kolesar (USA), Carole Chambers (Canada), Biljana Spirovski (Canada), Theresa Mays (USA), Helen Leather (USA), Amy Valley (USA), Tony Hall (Australia), John Wiernikowski (Canada), Amy Hatfield (USA), Sandra Kagoma (Canada), Cindy O'Bryant (USA), Birinder Kaur (Malaysia), Jayne Kivai (Kenya), Tan Chiew Khim (UK), Thorunn Gudmundsdottir (Iceland), Massimo Boni (Italy) and Alistair McMurray (UK), Denise Blake (UK), and Kim Stefaniuk (Canada). We will be collaborating with the Publications committee to bring to you "Topic of the Month" at the ISOPP website. Our first initiative was the topic "Drug Interactions". In addition to these topics of the month, we have plans to do the following over the next year:

- (a) New Drug Updates
- (b) Tools to assist you in your daily clinical practice such as "how to modify antineoplastic

doses in renal and hepatic failure" as an example

(c) Establish exchange grants so that members can visit another organization in their region of the world or another region.

A full report from the exchange and the information gathered will be submitted by the candidates and posted on the website.

(d) Further developing a slide database that all members can access and use. We would like to invite all members to consider notifying the Chair of the Education Committee when you give a talk where you think the slides would be of use to the greater membership. This way you can help others and they can help you.

(e) We will be developing the content for the next ISOPP meeting in Malaysia. Again feedback and membership participation is critical -please email the committee and let them know of your ideas and suggestions so that they can be accommodated for the meeting in 2006.

These are just a few of our initiatives. As we look to the future we also want to develop

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Editorial

Please allow me to introduce myself. I am David Frame, an oncology pharmacist at Rush University Medical Center in Chicago, Illinois. I am a member of the publications committee of ISOPP which is so wonderfully chaired by Jude Lees of Australia. Normally you would be seeing the brilliant



editorial of Jill Davis in this spot but since Jill now has her plate full as ISOPP Secretary there are going to be a series of guest editors and I am the first (Lucky ME!!). Since the last newsletter covered the events from ISOPP IX in Turin, there seems to be a slight lull in the information that was presented for this newsletter. Therefore in addition to the highly proclaimed "Day in the Life" I have tried a new venue for the newsletter. Some people have inquired to perhaps include some more "scientific" or educational piece in the newsletter.

With the risk of trying to make deadlines (that I am sure I have exceeded and that is why you may be receiving this a little later than usual) I have taken upon myself to write a very "Mini-review" of a topic that I have been very interested in for quite a while- Cachexia or involuntary weight loss associated with cancer. My mother died after a very long battle with Hodgkins Disease and over the 10 year span of several chemotherapy regimens I became very up close and personal with many of the side effects we see from chemotherapy and cancer itself. One of the most difficult was the cachexia and the fatigue, skin breakdown, weakness and everyday reminder of seeing the cancer literally eating away at her. This, no doubt is what made me go into Oncology. Now I take many of these symptoms personally and always do my best to help with the best possible supportive care we can give our patients. I do not think that we pay nearly enough attention to cachexia and often may be mistreating it. I hope that you find this short review interesting and inspiring so that more research will be done in this area of supportive care.

I want to thank Jill and Jude for the opportunity to be the first Guest Editor, and for all of those out there that might want to try their hand at it- it really was not bad. It gives you the privilege to make some changes and to express your opinions. You can find out more by contacting Jill Davis at jillian.davis@austin.org.au. I want to thank my mother as well whom I have included in the picture with myself. For so much I have her to thank and if not for her trials and tribulations, encouragement and hopefulness, I may never have found this wonderful profession.

ISOPP AWARDS

Being a part of ISOPP has numerous rewards associated with it. This is a great organization for being able to take part in international discussion sections both at meetings and everyday on the ISOPP website.

It is amazing how similar many of the concerns are around the world, and sometimes how different they can be as well. One of the rewards of being an ISOPP member is also being eligible for numerous recognitions that ISOPP has available. Included here are the winners of the ISOPP research award for 2003 as well as the very lucky (and knowledgeable) winners of the registration awards available only on the ISOPP website. Congratulations to all!!

ISOPP IX REGISTRATION AWARD WINNERS 2004



Sarah Jennings, Suzanne Taylor and Stavroula Kitiri are pictured here having a wonderful evening at the ISOPP 2004 banquet in Turin, Italy.

ISOPP Research Award 2003

It is twenty years since I became involved in Oncology Pharmacy by establishing the first centralised reconstitution service for antineoplastic agents in a German hospital pharmacy. Attending the 4th International Symposium of Oncology Pharmacy Practitioners at Hamburg in 1995, I enjoyed being amongst the founding members of the International Society of Oncology Pharmacy Practitioners.

From the beginning on, I had a strong interest in safety measurements, especially in personal protective equipment. Due to the fact that no data was available for products on the German market, we started our own research work in 1991. Since that time we have tested a broad range of protective clothing regarding resistance against permeation of various cytotoxic medicines. All tests that have been published so far are based on a two-chamber-principle. One chamber containing a solution of the cytotoxic medicine and the other chamber containing a collecting medium, both separated by the protective material. In most cases the collecting medium is an aqueous liquid.

We doubt that water is an appropriate collecting medium for all cytotoxic agents to gain effective information on permeation. In order to prove this assumption, we are undertaking a study, which is kindly supported by the ISOPP Research Award.

We are going to measure permeation of selected cytotoxic medicines through swatches of medical gloves made from latex, nitril, or neoprene. The medicines will represent a broad range of physical characteristics especially regarding solubility. This will include medicines that have been found permeating easily. These tests will be conducted by varying the collecting medium including water, an aqueous solution simulating the condition on the surface of the hand with regard to pH and hydrophilic-lipophilic-balance, and others.

A comparison of the data will prove whether the formula of the collecting medium is relevant to results of permeation testing or not. Results may be helpful to design one or more standard media for permeation testing.

Gerhard Carstens



Is Involuntary Weight Loss the Forgotten Vital Sign in Cancer Patients?

Mini-review

David Frame

As oncology pharmacists one of our primary goals in the treatment of cancer patients is to help provide the best supportive care available. With such endeavors in mind, we have seen a special emphasis placed on numerous supportive goals over the past several years. The role of supportive care became a major emphasis with the development of granulocyte colony stimulating factors. Used appropriately the result was a decrease in amount and duration of neutropenia and most importantly a decrease in the amount of febrile neutropenia and the associated morbidity, mortality and costs. There is now increasing amount of data to support more dose dense chemotherapy regimens in a variety of cancers and this can often only be achieved with granulocyte colony stimulating factors. As the role of supportive care became increasingly important there is now much more emphasis placed on increasing and maintaining quality of life in cancer patients. One of the goals became to reduce the amount of chemotherapy associated nausea and vomiting while another became to reduce the amount of cancer related anemia and the complications associated with anemia, especially fatigue. Very quickly nausea and vomiting and fatigue became very common factors in assessing the quality of life of cancer patients. More recently there has been a great emphasis placed on maximizing pain control. In the United States the primary accrediting organization for most hospitals, JCAHO, even made specific recommendations for hospitals to help assure a standard is in place for helping to control patients pain. Now in most hospitals pain is often referred to as the "fifth vital sign" that should be monitored as routinely as we measure temperature, blood pressure, heart rate, and respiratory rate. While there have been incredible strides made in supportive care for the oncology patient, with even a dedicated meeting Multinational Association for Supportive Care in Cancer (MASCC) (next meeting June 30 –July 2, 2005 in Geneva, Switzerland) and journal (Supportive Care in Cancer), there is still much to learn and many more symptoms that may warrant closer attention. One of these symptoms is the involuntary weight loss (IWL) associated with cancer, which is often referred to as cachexia. Interestingly cachexia is derived from the Greek words *kakos*, meaning bad, and *hexis*, meaning condition. This is certainly correct as there are many bad conditions that result from cachexia in cancer patients.

Cachexia is one of the most common paraneoplastic syndromes. Cachexia refers to progressive deterioration with muscle wasting and occurs when protein requirements are not met from decreases in

intake, increases in catabolism, or inappropriate utilization. The characteristics include anorexia, severe cumulative weight loss, muscle loss and weakness, anemia, fatigue, impaired immune function, and impaired cognitive function. The psychological affects on both the patient and the family can be overwhelming as the physiologic changes may be the one constant reminder of the cancer process and consequence. Survival time is often correlated with physiologic function with ECOG performance status or Karnofsky Performance Scores often being used to predict outcomes. These performance evaluations often are used in study inclusion/exclusion criteria as well and many patients with a lower performance score are not eligible for studies. Even as little as a 5% weight loss has correlated with a significantly decreased median survival rates in lung cancer trials. With such severe consequences associated with IWL, it should be monitored much more closely and taken much more seriously than what it often is.

As oncology pharmacists we are in a great position to help suggest that interventions be made when the patient starts to lose weight. Since weight is almost always a factor in calculating chemotherapy doses, it is a value that we routinely observe in our patients.

It is now clear that IWL is a multifactorial process which includes interactions among multiple biochemical and metabolic mediators including inflammatory cytokines, leptin, neuropeptide Y, tumor producing proteoglycans, and anabolic hormones. The biology of skeletal muscle has shown that muscle mass is not controlled by cell death and division but by synthesis and degradation of proteins within existing cells. As a result, it is becoming very clear that there are three primary components to intervention of IWL in cancer patients and the principles are the same as those used (or sadly sometimes abused) in sports. These three components are Nutrition, Exercise, and Hormones often referred to together as anabolic competence. Resistance training, nutritional supplements, appetite enhancers, and natural and synthetic hormones provide the backbone of treatment and prevention of IWL. Frequently the primary intervention in patients with weight loss is to use appetite stimulation- often with megestrol acetate. While there appears to be small differences in appetite stimulation at doses of 100 mg to 800 mg per day, there is generally a greater percentage of patients who have more than a 3 kg weight gain with 800 mg per day. Interestingly however, it appears that the majority of the weight gain is due to fat body mass and not to lean body mass. The real goal of treating and preventing IWL should be to increase or maintain lean body mass to improve

function. Increasing the appetite without providing the appropriate protein and exercise will most likely not improve lean body mass. Amino acids such as glutamine, arginine and leucine may help promote gain of lean body mass. Many studies have shown that testosterone and its analogs support muscle growth. While anabolic steroids often have a negative connotation, they may be very beneficial in IWL. Testosterone levels are commonly reduced in patients with cancer. Newer anabolic steroids such as oxandrolone have shown when used in weight-losing cancer patients that not only was there weight gain but the majority of the gain was due to lean body mass and associated with improved ECOG performance status and quality of life. It is often believed that it is impossible to maintain weight in patients with advanced cancer and that cancer cachexia is inevitable and its progression is unstoppable. The consequences of lean body weight loss compounds the side effects seen with chemotherapy and is probably a key mediator in the overall decrease in quality of life and function seen in cancer patients. This is at least as important as pain and nausea control and unfortunately is often overlooked. It is time that we bring this "bad condition" to the forefront and confront it earlier in patients with appropriate interventions to maintain anabolic competence.

For more in depth reviews of this topic please consult the following references: Argiles JM, Almendro V, Busquets S, Lopez-Soriano FJ. The pharmacological treatment of cachexia. *Current Drug Targets*. 2004;5(3):265-77

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A DAY IN THE LIFE OF AN ASEPTIC SERVICES MANAGER

ANN HOGAN, United Kingdom



• **8am** – the day begins with the journey to work. First stop Ophelia's school and then on to the hospital nursery to deposit little Leo. It isn't far-less than 2 miles and the cycling helps to keep me fit.

• **8-45am**

Nuclear Medicine is the first port of call – the preparation of radioisotope injections is always supervised by a suitably qualified pharmacist. Typically we would expect to prepare 3 or 4 kits and see perhaps the first 6 injections drawn up. All of the



• **1-30pm**

The sumptuous National Health Service lunch complete, it is time to do the clinical validation of tomorrow's chemotherapy prescriptions. All prescriptions are checked against approved protocols-any not conforming or not matching one are investigated further. This ties in with some well documented training relating to the subject for my dear colleague Claire-a pharmacist and clinical pharmacy diploma student on rotation with us for 2 months (lucky girl). This will help tick the right boxes when we have our annual audit by Regional Quality Control in April!

• **2-30pm**

The validation process shows a few problems on some prescriptions so I head up to the day unit to access the appropriate patients' notes and chat to the nursing staff. We discuss scheduling in a patient for the following day who is not on the treatment list and doesn't yet have a prescription -we decide on a slot at 12 midday.



• **3pm**

The oncology lead and the local rep from the pharmaceutical company Kyowa-Hako come in to discuss the "Mito-in" device. It is currently being used by nurses at various centres throughout the UK to reconstitute mitomycin C in urology clinics and theatres. We haven't adopted it at Torbay yet as I am not sufficiently satisfied that it provides a totally closed reconstitution system posing no risk to nurses. The company agrees to undertake some safety testing specifically looking at the risk of aerosols.

• **4pm** TEA, TEA AGAIN - the team usually stops together in the afternoon, especially if it's Wednesday when one person is designated to be "cake fairy". This week brings a giant chocolate caterpillar as it

is Sally's birthday-yippee.

• After tea Signing in the chemo for the following day's clinics and in patients.

5'ish Head off



to get Leo from nursery (Grandma kindly collects Ophelia for me) and we pedal happily for home sweet home.

With grateful thanks to Mr. Lavercombe, the Aseptic Services and Nuclear Medicine Teams and the staff of the Ricky Grant day unit at Torbay Hospital for participating in the making of the visuals for this epic!

Editor's Note: Since writing, Ann is now the proud mother of her third child Rafaella.



aseptic manipulations are performed by a radiographer. Mr Lavercombe is the patient having a bone scan here and kindly consented to participate in the picture as long as we showed his best side!

• **10-15am**

Back to the pharmacy department to help with releasing the chemotherapy batches for the day's treatment. If all has gone to plan everything is running smoothly-if not, there might be late prescriptions to sort out, a faulty isolator compressor to deal with, air handling that has broken downand so on! Thankfully all is usually straightforward, and if not, one of our marvellous team often already have the problem in hand.

• **TEA,TEA**-everything stops for tea and one of Betty's enormous bath buns

• **11-30am**

Batteries recharged, a patient arrives from the rheumatology outpatient clinic. She is going to be self administering methotrexate injections at home. I spend about half an hour explaining to her how the forthcoming injection supply will work (we buy in 3 months at a time from Baxter Healthcare and send them out to the patient at home). We discuss storage, safe handling and disposal of waste and give clear contact details in case of a problem. Liz, the specialist rheumatology nurse deals with the administration details. The system seems to work well.



• **12-00am**

On to the Pharmacy ICN (Integrated Care Network)

Planning group meeting for a working lunch (scary sandwiches and an apple thrown in for free!) We are having a new hospital in 2009 and are bidding for space and equipment. The plan is to double our clean room space to 4 separate rooms housing 2 isolators each. It is quite a challenge working out what to ask for with restraints on space and budget. Cancer Services possibly want to site us next to the chemotherapy clinic but other issues may dictate that we remain centralised in the pharmacy department. There are plus points for each option.

