

Occupational Medicine Clinical Update

Dedicated to the prevention of occupational illness and injuries, and promoting the well-being of all workers

Occupational Health Clinics for Ontario Workers Inc, Sarnia-Lambton

Welcome to Readers

This Issue:

- Introduction to occupational medicine newsletter
- Case report - ITP/GN and silica/solvents/hydrocarbons
- A brief history of the Sarnia Clinic
- Reaching us
- Upcoming topics

Occupational Medicine is a relatively little known specialty. With this newsletter we hope to communicate with local physicians on the many ways in which work can impact on our patient's health, and what we as physicians can do to improve it.

Given the number of hours we spend at our vocations it only stands to reason that the workplace will influence our health and longevity. We plan to present you with the science that supports this notion.

We recognize that the time pressures on physicians in this community are ever-increasing. Often it is simply impossible to deal with anything more than the immediate medical concern and then move on to the next patient.

It is our hope that we will be able to help support you as a clinic to refer patients whose symptoms, or diseases, may be work-related.

Our occupational health nurses, industrial hygienists and ergonomists have special training and knowledge to take a detailed occupational history. Identifying the exposures (chemical, thermal, physical) is the first step. This enables the physicians to examine the relationships between diseases and exposures, diagnose and make rec-

ommendations to patients and their physicians on taking appropriate steps to avoid various occupational diseases (e.g. hematologic disorders and malignancies in petrochemical workers).

We also plan to assist the medical community by disseminating guidelines on surveillance for certain conditions (e.g. medical assessments for asbestos-exposed workers).

Using the various resources at our disposal we may be able to establish a relationship between a work-related exposure and a particular disease, *if there is scientific evidence to do so*. As the case below illustrates, we can only prove what there is science to support.

Making these determinations can be extremely time-consuming and complex when trying to run a busy practice. We hope that our knowledge of occupational health and safety will enhance your patient's quality of care, and we look forward to assisting you with these types of issues.

It is our hope that this newsletter will be both thought provoking and informative. If you have any questions or suggestions please contact us.



Should My Patient be Worried About the Workplace? – Case in Point

A 36-year-old male factory worker was referred to the clinic with ITP and a glomerulonephritis (GN). He was concerned his work might have contributed to his diseases and ongoing recurrences.

The patient had worked fifteen years in the factory and was consequently exposed to considerable silica dust, as well as various metals, hydrocarbons, oils and solvents. The nature of the processes in this plant resulted in heavy respiratory and dermal exposure to these substances.

After ten years in the plant he developed ITP. Two years later he was diagnosed with a GN that had left him with

half his renal function. It was felt by the nephrologist that both these conditions were autoimmune in nature and probably part of a systemic vasculitis, such as Wegener's or SLE, but did not specifically meet the diagnostic criteria for them.

Since the original diagnoses, he had acute recurrence of both his ITP and GN, the latter with systemic symptoms. He had continued working throughout his illnesses except when admitted to hospital.

The patient had been an extremely fit individual. He played semi-pro hockey, never smoked, drank very little and did not

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**Occupational Health Clinics for Ontario Workers Inc,
Sarnia-Lambton**

171 Kendall Street
Point Edward, Ontario
N7V 4G6

Phone: 519-337-4627
Fax: 519-337-9442
Email: sarnia@ohcow.on.ca

Edited by:
Warren Teel, M.D.

Medical Staff:
Abe Reinhardt, M.D. areinhartz@ohcow.on.ca
Jim MacKenzie, M.D. jmackenzie@ohcow.on.ca
Warren Teel, M.D. wteel@ohcow.on.ca

OHCOW'S WEBSITE:
WWW.OHCOW.ON.CA

A Brief History of the Sarnia Clinic

This clinic arose primarily out of the huge caseload of asbestos-related diseases resulting from Holmes Foundry, as well as other asbestos-insulated plants in the Chemical Valley. Originally, the patients were being seen in the Windsor clinic. Since the Sarnia clinic was expanded in 1999 to deal with these numbers the increased awareness has, ironically, created a huge backlog of patients. There is also the challenge of the continuing influx of new patients.

Our staffing capabilities have improved now and we are in the ongoing process of developing ways to deal with these cases expeditiously. We can see your patients quite promptly depending on the seriousness of the situation.

Please contact us (by phone, fax, e-mail or letter) for referrals or if you need information on a specific occupational problem.

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drink coffee or tea. Family history was unremarkable. He reported that a young coworker at the plant had just had a kidney transplant, and another also had 'kidney problems'.

For ITP, there was no research examining occupational exposures. There was a single case report of recurrent ITP felt to be secondary to recurrent exposure to polyurethane.

A review of the literature showed strong evidence of a relationship between GN and silica dust. There was also considerable literature implicating various hydrocarbons and solvents. Furthermore, a wide variety of other autoimmune disorders have been linked to silica dust (particularly scleroderma) and various petroleum distillates.

The case was discussed at multidisciplinary rounds (industrial hygiene, occupational nursing, medical). The evidence for GN and silica/hydrocarbons was agreed to be scientifically strong. There was no research to formulate an opinion on the question of ITP. Although the patient's ITP/GN appeared related, there was no definitive diagnosis linking them.

Of particular concern, was both experimental and epidemiologic evidence [Mutti et al, 1999; Stengel et al, 1995] sug-

gesting that people with chronic kidney diseases should avoid exposures to solvents and hydrocarbons in the workplace as they may accelerate the progression of such diseases.

A letter with the relevant references has been sent to the family physician and nephrologist .

References

Mutti A, Coccini T, Alinovi R, Toubeau G, Broeckeaert F, Bergamaschi E, Mozzoni P, Nonclercq D, Bernard A. 1999. Exposure to hydrocarbons and renal disease: an experimental animal model. *Ren Fail.* 21(3-4):369-85.

Stengel B, Cenee S, Limasset JC, Protois JC, Marcelli A, Hemon D. Glomerular nephropathies and exposure to organic solvents—a case-control study. 1996. *Bull Acad Natl Med.*180(4):871-9.

In Upcoming Issues:

- Taking an occupational history
- Chronic organic solvent neurotoxicity
- Quick reference chart of common occupational diseases/hazards
- Researching occupational disease
- Determining causality