Paraneoplastic pemphigus

Also known as paraneoplastic autoimmune multi-organ syndrome (PAMS)

What is paraneoplastic pemphigus?

Paraneoplastic pemphigus is a rare, severe blistering condition of the mucosal surfaces and skin associated with an underlying cancer.

What causes paraneoplastic pemphigus?

The cancer is thought to trigger paraneoplastic pemphigus but the mechanism is not known. The cancer releases antibodies to particular proteins found in many tissue surfaces which result in the inflammation and blistering. There is a genetic susceptibility in some individuals.

What does paraneoplastic pemphigus look like?

Intractable and painful sores on the lips and in the mouth (stomatitis) as well as other mucosal linings (e.g. eyes, nose, oesophagus, genitals) are the predominant features of paraneoplastic pemphigus. The associated discomfort often results in severe exhaustion and a lack of appetite. A skin rash develops later with many different features, possibly including blisters. It typically involves the face and hands and then spreads to the rest of the body. The rash often looks like other conditions such as pemphigus, pemphigoid, erythema multiforme, lichen planus or graft versus host disease.
Other organ systems may be affected.
Secondary infection and septicaemia are common complications.

What other problems can occur with paraneoplastic pemphigus?

Cancer is associated with all cases of paraneoplastic pemphigus. In two thirds of these, the cancer is present at the time of diagnosis and the remainder will be identified after diagnosis. The most common associated cancers include: haematological cancers such as non Hodgkins lymphoma (38.6%), Castleman tumour (18.4%), chronic lymphocytic leukaemia (18.4%), Waldenstrom macroglobulinaemia (1.2%), Hodgkin's lymphoma (0.6%) and monoclonal gammopathy (0.6%); and other types of cancer (8.6%) and sarcoma (7%), malignant and benign thymoma (5.5%), and rarely others.

How is paraneoplastic pemphigus diagnosed?

Skin biopsies are usually required to confirm the diagnosis. Routine samples are taken. These may show that the cells in the surface skin are not adhering to each other and the underlying deeper skin, in a normal manner. Tests from adjacent but not blistered skin may show immune proteins and another blood complement deposited between cells and along the basement membrane zone.
Blood tests may show evidence of special pemphigus autoantibodies (immune proteins active against one's own tissues).
Screening for the most common associated cancers should be performed including imaging such as MRI of chest, abdomen and pelvis. Pulmonary function tests should be performed to exclude

respiratory complications and regular swabs taken to exclude super infection such as herpes simplex.

How is paraneoplastic pemphigus treated?

Paraneoplastic pemphigus is generally difficult to treat and requires a multi-disciplinary approach.
General measures include good oral hygiene, pain control, chlorhexidine mouthwash, lubricants for eyes and nose. Pureed and soft foods may be required as affected individuals are often unable to eat and swallow normally.
Intensive supportive nursing care is required including regular observation monitoring, barrier nursing (strict procedures to avoid transmitting infection from carers and visitors), non-stick dressings and intravenous fluids.
Specific treatment is aimed at suppressing the blistering disorder using immunosuppressive agents that may include oral steroids, intravenous immunoglobulin, azathioprine, cyclosporine, mycophenolate mofetil, cyclophosphamide, plasmapheresis and rituximab.
In addition, the underlying cancer needs management with combinations of surgery and chemotherapy.
If the underlying cancer is not apparent at the time of diagnosis, regular review is required.
Many medical, nursing and paramedical experts are required to look after those affected.
Severe infections and respiratory problems are frequent and other organ systems may also be involved further complicating the management of the condition.

What is the prognosis in paraneoplastic pemphigus?

Paraneoplastic pemphigus has a very high mortality rate (75-90%) due to septicaemia, multi-organ failure, respiratory failure (including bronchiolitis obliterans and obstructive lung disease), gastrointestinal bleeding, the cancer itself or complications of the cancer therapies at the same time as immunosuppression. Typically those affected with paraneoplastic pemphigus succumb from disease 1 month to 2 years post diagnosis.