

95%. The overall concordance of prick testing and intradermal test is 97%. Both types of tests can be used for such diagnosis.⁴ A study from France, including a total number of 68 children who had hypersensitivity reactions to general anaesthesia, reported that 31 (60.8%) of the children had IgE-mediated anaphylaxis for NMBD, most with vecuronium. They reported no systemic reactions during tests and suggested that skin tests with anaesthetic agents are feasible and safe in children and improve the safety of subsequent anaesthetic procedures.⁵ Farrell et al.,⁶ reported a case of anaphylactoid reaction during intradermal testing with vecuronium when used with a higher than recommended test dose. In our case, desaturation was the only finding during anaesthesia whereas he had hypotension, angio-oedema and respiratory difficulties during testing. This could be explained by repetitive doses, which, although they were minimal, can remind the body about its hypersensitivity to the drug and induce more severe symptoms of anaphylaxis. To the best of our knowledge the age of our case was the youngest child ever to experience anaphylaxis during intradermal testing with vecuronium in the English literature.

In conclusion, although prick tests and intradermal tests are principally safe, they should be performed only by trained physicians in a setting with adequate resuscitation equipment, due to the risk of a systemic reaction. Moreover, we suggest performing prick and intradermal tests even if the patient has a strong history of anaphylaxis.

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The extended family and the poor asthma control in children. A look at family functioning, authority and hierarchies

To the Editor,

Despite adequate administration of daily controller medication, the number of children with uncontrolled asthma is considerably high and reduced quality of life is observed in both parents and children with poor control.¹ Multiple psychosocial problems can contribute to poor asthma control in a similar proportion to poor treatment adherence.² From previous studies of psychosomatic families, it has been postulated that there are certain stereotypical types of organisation within them such as agglutination, reciprocal overprotection, rigidity and avoidance of conflict.³ These types of family patterns are highly related to the development and maintenance of psychosomatic symptoms which play an important role in the homeostasis of the family.⁴

From a systemic perspective, the family becomes the protagonist in the symptoms of the indicated patient (scapegoat). The objective of the present study was to identify behavioural patterns within the family unit with respect

to the asthmatic patient with uncontrolled asthma and living in extensive families, putting emphasis on authority and hierarchy in such families.

Seven extensive families with a child between the ages of 6 and 11 years old with uncontrolled asthma, confirmed when 19 or less points were reached by children after application of the asthma control test.⁵ Children's data were obtained from the database of the Institute for Scientific Research in Family, Allergy and Immunology in Morelia, Mexico, in May, 2008. Ten extensive families with a child with uncontrolled asthma were initially considered to be included in the study, but only seven of them finally decided to participate in it.

Family functioning was evaluated in nine different areas with Dr. Emma Espejel Acco's Scale of Family Functioning⁶ as a reference base. This scale was chosen because it could attain the desired objective and because it was standardised for the Mexican population with a sensibility of 0.91 to discriminate between dysfunctional and functional families. This instrument is also 0.94 accurate when applied by our team of psychologists who are trained in their application and interpretation. Furthermore, a questionnaire was used to study clinical and demographical aspects in the sample population.

In this study, 95% was considered statistically significant using Student's *t* test and Pearson's correlation was used to analyse the relation between two areas of family function and written informed consent was obtained from participant families. The protocol was approved by the institutional ethics committee.

Reviewing the clinical and demographical data from the population poll it was obtained that in 71.4% of the families the child who was diagnosed with asthma was 9 years old, the rest of the children who suffered from asthma were seven and 12 years old. In 57.1% (four families) of the population polled the child with asthma was male. It was found that 85.7% of the children with asthma were attending primary school between years 1 and 4; 71.4% of the children diagnosed with asthma lived with their parents and grandparents; and 57.1% of the children did not participate in extracurricular activities.

In 85.7% of the families studied, the asthmatic child had at least one brother/sister, and in 57.2% of the families the brother/sister was the eldest of the children. It was found that the amount of years spent in school was higher for the mother than for the father ($p < 0.05$). In 85.8% of the children it was found that they were diagnosed with asthma in a period of 5–10 years before and 42.9% received at least one treatment for asthma. In 71.5% of the families, the treatment for the child was administered by at least one specialist (paediatrician or allergist). 85.7% of the families acquired a physician for their child's treatment, 57.1% of the children suffered an asthmatic crisis every six months, of which these occurred 2.7 times more frequently at night than in the morning or afternoon. A family history of asthma was found in 57.1% of the families with asthmatic children. Of all the children studied, the most important catalyst for the asthmatic crises were environmental factors.

The results obtained via the Scale of Family Functioning are shown in Tables 1 and 2 where families were characterised considering areas of family functioning and the most important correlations found among them, respectively. The major parts of the evaluated areas were affected:

control, supervision, affect, disruptive conduct, communication, negative affect and resources, were fairly to poorly functional mainly, however the 42.9% of the families were functional in the area of support. The most significant positive correlations observed among studied areas were between support and disruptive conduct ($p < 0.001$), between disruptive conduct and negative affect ($p = 0.005$), between support and negative affect ($p = 0.005$), between control and support ($p = 0.028$) and between control and disruptive conduct ($p = 0.028$).

Clinical and demographical data showed poor control of asthma, unsatisfied demands of medical assistance, frequent familiar history of allergies, and deficient social insertion of the asthmatic children in community, which is in close relation with the recurring behaviour of the psychosomatic system. The fact that the majority of the areas of the Scale of Family Function revealed families with fairly functional or poorly functional behaviour, indicates rigidity in the system. The correlations found among areas of family function indicate that when the efficiency of authority is high the family members provide social support within and outside the family nucleus, and when this support exists the family well manage limits and methods of behavioural control. On the other hand when the control is high the family can modulate the presence of negative feelings and emotions, recognising the existence of potential affective instruments and their capacity to use them is also activated. Authority and control were associates with an efficient management of inappropriate social behaviour and when support was high the families responded to the presence of negative feelings, which was excellent, when verbal and non-verbal expressions functions were not compromised.

Considerable attention causes the existence of coalitions against parents of the children with uncontrolled asthma in three from seven of the studied families, these coalitions were grandfather and grandmother against mother and father (1/7 families); grandmother and his daughter against mother (1/7 families); and grandmother and grandfather against father (1/7 families). With respect to the hierar-

Table 1 Families according to areas of the Espejel Acco's Scale of Family Functioning.

Function family area	Functional (%)	Fairly functional (%)	Poorly dysfunctional (%)	Dysfunctional (%)
Authority	–	28.6	57.1	14.3
Control	14.3	28.6	57.1	–
Supervision	–	85.7	–	14.3
Affect	–	28.6	71.4	–
Support	42.9	28.6	28.6	–
Disruptive Conduct	–	42.8	28.6	28.6
Communication	–	42.8	57.2	–
Negative affect	–	42.8	28.6	28.6
Resources	–	14.3	85.7	–

Support: refers to the form in which the family members provide social support within and outside of the family nucleus. *Authority*: efficiency of authority within the family. It is considered as more functional in families where the authority resides in a parental subsystem, which is shared by both parents. *Disruptive conduct*: this deals with the handling of inappropriate social behaviour such as addictions, problems with authority or other emerging situations. *Affect*: the way in which the family express the sates of wellbeing or discomfort. *Control*: how the family manages limits and methods of behavioural control and the families with well established limits that are respected are considered more functional. *Negative affect*: how the presence of negative feelings and emotions functions within the family. *Supervision*: put emphasis in rules permitted by the family and their accomplishment. *Resources*: refers to the existence of potential affective instruments and the family's capacity to utilise and develop them. *Communication*: evaluates the form in which verbal and non-verbal expression functions within the family.

Table 2 Relation between areas of Family Function.

Relation between areas of familiar function	Correlation coefficient	<i>p</i>
Support and authority	0.767	0.044
Authority and disruptive conduct	0.767	0.044
Control and support	0.807	0.028
Control and disruptive conduct	0.807	0.028
Control and negative affect	0.778	0.039
Control and resources	0.801	0.031
Disruptive control and negative affect	0.907	0.005
Support and disruptive conduct	1	0
Support and negative affect	0.907	0.005
Communication and negative affect	0.764	0.046

chies, in 1/7 families the father/grandfather was the chief member, in one family both grandparents wielded the power predominantly and in two families the power was exercised by the father/husband mainly, despite the existence of higher academic levels in mothers than those found in fathers and grandparents. Succession and inheritance factors and poverty status of families living in more than two generations of its members could be linked to this behaviour in our environment, it demands further studies.

On another note, the studied families were resistant to change, presenting themselves contrastingly united and harmonious with only one clear problem; the child's illness. External relationships were scarce and the family clings to preservation of their own homeostasis, debilitating exchange with their social surroundings, said in other words, they avoid all contact or informational feedback becoming a closed system. The rigidity was reflected once the negative behaviour was analysed and affection control management explored via the scale of family functioning. All this leads to unsolved conflicts that become cyclical, being inherited from one generation to another. An area that reflects this characteristic is resource, due to the fact that it is poorly functional, which indicates that the family does not know how to use them, it has the resources, but it is not allowed to use them or the family cannot identify the way to use them.

The children of these families are subject to a type of behavioural alignment in which they are boxed in and obliged to maintain the family dynamics. In a family where one supports the other, moved by the ideal of reciprocal hyper-protection, the patient becomes the one who most needs the care. On the other hand, when tension arises in the family with a possible argument, the subject of the argument becomes secondary as the patient enters the scene and suppresses the subject as all are concerned for his/her health and wellbeing in accordance with Minuchin.⁴

The parent's deficiencies to fulfil the child's needs in each phase of his/her development, could explain certain psycho-physiological disorders in their children. It is observed that the scapegoat, the victim of an attack, is the member that becomes the object of attacks provoked by prejudices, and suffers emotionally which makes him/her susceptible to emotional breakdown at various levels.^{7,8} Unlike a similar study conducted in nuclear families with children with asthma,⁹ extended families in this study showed greater commitment in the areas of authority, super-

vision and disruptive conduct, which are related to the poor allocation of authority between parents and the existence of alliances or coalitions that hinder the development of the family.

The results obtained via the Scale of Family Functioning showed that all evaluated areas of family functioning could be affected in extensive families with a child with uncontrolled asthma, even when the majority of them were in the range of fairly functional to poorly functional. Their evaluation in families in which children remain with uncontrolled asthma despite adherence to pharmacological treatment and the analysis of correlations among such areas should be used to detect families needing psychotherapeutic assistance to reach a better control of the disease. Recommendations for future research include the validation of the Espejel Acco's Scale of Family Functioning in other cultures and replication of the study with a larger sample of children with uncontrolled asthma comparing their families with those of children with controlled asthma.

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Severe dermatitis caused by diltiazem

To the Editor,

Skin rash which caused by drugs shows a high polymorphism, which is determined, on the one hand, by the large amount of drugs used, and on the other hand, by the presence of polymedication, particularly in seriously-ill elderly patients, that increases the possibility for interaction among them, with the attendant risk of morphological expression of medicinal rash.

The spectrum of these reactions ranges from mild rash to the most severe forms, which are Stevens-Johnson's syndrome and epidermal toxic necrolysis. The term epidermal necrolysis is a neologism proposed by Lyell¹ to indicate necrosis and separation of epidermis. Blisters are merely exudates accumulating under the necrotic epidermis. The necrolysis phenomenon results from massive apoptosis of the epidermal cells, together with the degradation of the adhesion molecules between the basal cells and the basal membrane of the epidermis.² Stevens-Johnson's syndrome and epidermal toxic necrolysis are considered to be variants of the same disease, based on their similar condition (epidermal necrolysis), similar risk factors, causes and frequent progression from Stevens-Johnson's syndrome to toxic epidermal necrolysis. The main difference between these two conditions resides in the extension of the skin lesions: classified as Stevens-Johnson's syndrome when necrolysis affects less than 10% of the body surface; as superposition of both when it affects from 10 to 30%; and as toxic epidermal necrolysis when it affects over 30% of the body surface.³

We here present the case of a 66-year-old woman, with a history of depressive syndrome treated with mirtazapine and previous cholecystectomy, who in the past year reported dyspnoea on moderate effort. Fifteen days before admission, she started to suffer cough and expectoration, and subsequently fever of 39 °C and increased dyspnoea. She also reported palpitations starting a few days before admission.

On admission the patient had a temperature of 39 °C, 140 beats per minute, arrhythmia, BP 120/60, 88% oxygen saturation, normal cardiac auscultation and pulmonary auscultation with hypoventilation and bilateral wheezing. The rest of the physical examination was normal.

The chest X-ray carried out was normal and the ECG showed atrial fibrillation at 140 beats per minute. Blood count showed 14200 WBCs with normal formula, normal RBCs and platelets. Biochemistry showed glucose 125, GPT 44, with other normal parameters.

The admission treatment was levofloxacin, furosemide, diltiazem, digoxin, sintrom (coumarin), cloperastine, N-acetyl cysteine, and bromazepam, continuing treatment with mirtazapine. Twelve days later, the patient started to suffer from a maculopapular rash, first erythematous and then purple in colour, which started on her head, neck, and upper chest and then descended to affect all of her skin. Despite discontinuing all of the drugs, some pustular lesions (on her back), large blister lesions and areas of skin detachment appeared, affecting the trunk, the arms and the legs (Figs. 1 and 2). Pathological studies can be observed in Fig. 3. The patient also had ulcer lesions in the oral mucosa. The day after the condition started, imipenem had been added to the treatment.

Treatment was instituted with chlorphenamine and methylprednisolone intravenously at doses of 120 mg/day, despite which progressive evolution of the skin lesions continued. After the blister lesions and skin detachment occurred, and for fear of an evolution to a highly severe condition such as Stevens-Johnson's syndrome or toxic epidermal necrolysis, it was decided to add cyclosporine



Figure 1 Skin rash with some pustular lesions and areas of skin detachment.