

## ROLE OF AYURVEDA (PREVENTIVE ASPECT) IN PRAMEHA (SAHAJ) W.S.R TO JUVENILE DIABETES

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Article Received on  
24 March 2018,

Revised on 15 April 2018,  
Accepted on 06 May 2018

DOI: 10.20959/wjpr201810-12302

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### ABSTRACT

Diabetes mellitus is a heterogeneous group of disorder and is characterized by increased plasma glucose. In the majority of patients with diabetes, the etiology of the disease is not understood. Expert panels have recommended one set of criteria for diagnosis and another set for classification. The criteria serve two purposes. One is to secure optimal treatment of the patient. The other is to support research aimed at understanding the etiology and pathogenesis of diabetes syndromes. Type-1 DM has a huge impact on growth and development of a child. Juvenile DM is primarily caused due to destruction of insulin producing islets of pancreas. According to view of *Ayurveda*, *Prameha*

is mentioned as one of the *ashtau maha gada* by various Acharya's in Ayurvedic literature. According to acharya Charaka, *Beej dushti*, *Matru ahar-vihar*, *Kaal*, and various other *Apathyas* play a key role in formation of *prameha*. One of the most basic principle of *Ayurveda* i.e. "*Swasthasya Swasthya rakshanam*" forms a guideline or a vision in prevention of *prameha*. Pre-conceptual *pancha karma shuddhi*, role of proper diet, yoga etc. are all are important ways to avoid any *sahaj vyadhis* like *sahaj Prameha*. As *Nidan/hetu* has a basic role in *Samprapti* of any *vyadhi*, its prevention forms the basis of treatment. So, *Nidan parivarjanam* in case of Type-1 DM would be of definite: help in decreasing its incidences.

**KEYWORDS:** Juvenile Diabetes Type-1 DM (Sahaj Prameha), Beej Dushti, Nidan Parivarjanam.

## INTRODUCTION

Type 1 (insulin-dependent) diabetes occurs worldwide and can appear at any age but diagnosed mostly at the age of 7-15 years.<sup>[1]</sup> The genetic susceptibility is strongly associated with HLA-DQ and DR on chromosome 6, but genetic factors on other chromosomes such as the insulin gene on chromosome 11 and the cytotoxic T-lymphocyte antigen gene on chromosome 2 may modulate disease risk.<sup>[2]</sup> Numerous studies further support the view that environmental factors are important. Gestational infections may contribute to initiation, whereas later infections may accelerate islet  $\beta$ -cell autoimmunity. The pathogenesis is strongly related to autoimmunity against the islet  $\beta$  cells. Markers of autoimmunity include autoantibodies against glutamic acid decarboxylase, insulin, and islet cell antigen-2, a tyrosine phosphatase-like protein. Combined genetic and antibody testing improved prediction in the general population despite the transient nature of these autoantibodies. Islet autoantibodies do not seem to be related to late complications but rather to metabolic control, perhaps because the presence of islet cell autoantibodies marks different residual  $\beta$ -cell function. The causes of type 1 are not fully known. But in most cases, the body's immune system attacks and destroys the part of the pancreas that produces insulin. Family history plays a role, but only in about 10% to 15% of people with type-1 DM. There is also greater risk of developing type-1 DM if one has another autoimmune hormone-related condition such as Hypothyroidism, Hashimoto's thyroiditis, or Addison's disease.<sup>[3]</sup> Recently, new guidelines have been suggested for the concentrations of blood glucose to be used to diagnose diabetes. Normal fasting plasma glucose (FPG)<sup>1</sup> is  $<6.1$  mmol/L (110 mg/dL). Impaired fasting glucose is  $>6.1$  mmol/L (110 mg/dL) and  $>7.0$  mmol/L (126 mg/dL).<sup>[4]</sup>

### Classification

#### Three main types<sup>[5]</sup> of DM associated with children

- Type 1 DM/ IDD/ Juvenile DM
- Type 2 DM
- Gestational DM.

Type-2 DM (also known as adult-onset diabetes) usually develops after age 40 but can appear in children, particularly if they are obese. With type 2, the pancreas produces insulin, but either it is not enough or the body can't use it effectively. Insulin treatment isn't always necessary, as it is with type.

Table no-1. (Difference between Type-1 and Type-2 diabetes).

Features	Type 1	Type 2
Onset	Rapid	Slow
Age of onset	Young	Adults
Obesity	Thin	Wt. gain
Ketoacidosis	Common	Rare
Autoantibodies	Present	Absent

Kaumarbhritya is one of the eight specialised sub-divisions of *Ayurveda*; the science of care of the child includes prenatal care, the nursing & healthy upbringing of infants & children, purification & improvement of breast milk & treatment of diseases. So this branch does not relate only to treatment of childhood disorders but it also has important role in preventive aspects of childhood problems. According to *Ayurveda*, *Sahaj prameha* (Type-1 DM) is discussed under the branch, *Kaumarbhritya*. *Acharyas* mentioned *Prameha* (*Sahaj* or *Madhumeha*) in a *maharoga*<sup>[6]</sup> (major disease), formed by the union of 13 *dosha-dushya sangraha* except *Asthi dhatu* and mainly "*bahu drava shelshma*", "*bahu abadh meda*". There are 20 types of *prameha* due to interaction of 3 doshas and 10 *dushayas*.

1. According to *Ayurveda*.
2. Types- *Sahaj prameha* & *Apathyanimittaj Prameha*<sup>[7]</sup>

### *Sahaj prameha in Samhita*

द्वौ प्रमेहो भवतः । सहजो अपथ्यनिमित्तश्च, तत्र सहजो “**मातृपितृ बीज दोष कृतं**” ।।<sup>[7] su.chi.11]</sup>

तत्र सहजोः शुकार्तवदोषान्वयाः कुष्ठार्शमेहादयः ॥<sup>[8]</sup> अं.स.शा.२/२

**बीज दोष** (Genetic Predisposition): -

यस्य अंगावयवस्य बीजे बीजांशो वा उपतप्त भवति तस्य तस्यांगावयवस्य विकृतिरुपजायते दोष जायते ॥<sup>[8]</sup>

अं.स.शा.२/४७

बीजात्मकर्माआशयकालदोषैः । मातृस्तथाऽऽहारविहारदोषैः ॥

कुर्वन्ति दोषा विविधानि दुष्टाः । संस्थानवर्णन्द्रियवैकृतानि ॥<sup>[9]</sup>

- च.शा. २/२९

*Acharya charaka* had also mention 2 another types of *prameha*...

स्थूल प्रमेही बलवान हि एको कृशस्तथैकः परिदुर्बलश्च ॥<sup>[10]</sup>

च.चि.६/१५

As mentioned by *Ayurveda*, *beejbhagdushti* or *beejdushti* of parents play an important role in the defect in the respective organ, a part of the whole body of their children's. Hence proper *shuddhi kriyas* can to some extent be beneficial for healthy progeny.

### Symptoms

Type 1 diabetes signs and symptoms can appear relatively suddenly

- Increased thirst
- Frequent urination
- Bed-wetting in children who previously didn't wet the bed during the night
- Extreme hunger
- Unintended weight loss
- Irritability and other mood changes
- Fatigue and weakness
- Blurred vision

### Causes

The specific cause of type 1 diabetes is unknown. Generally, the body's individual immune system — which normally combats destructive bacteria and viruses — mistakenly destroys the insulin-producing (islet, or islets of Langerhans) cells in the pancreas. Other possible causes include:

1. Genetics
2. Exposure to viruses and other environmental factors.

### Treatment

All children with type 1 diabetes must use insulin injections to control their blood sugar. There is no any treatment for total cure of type 1 diabetes.

**Role of *Ayurveda***-with the help of strength of *Ayurvedic* principles, type 1 diabetes can be prevented. By delaying onset, lowering insulin requirements, decreasing severity of symptoms & complications *Ayurvedic* principles may play major role.

**Prevention:** There is no known way to prevent type 1 diabetes. But scholars are working on preventing the disease or further destruction of the islet cells in people who are newly diagnosed. As childhood is the most important and delicate phase of life, to maintain its quality is also an important part. To maintain the health, is the main aim of *Ayurveda*. As *nidan / hetu* has basic role in causing of any disease, its prevention is key role. So, *nidan parivarjanm* in case of DM Type-1 would be of help in decreasing its prevalence. Type-1 DM is generally caused due to genetic/congenital factors; therefore, parents play a root cause in passing it on to the progeny.

प्रयोजनं चास्य स्वस्थस्य स्वास्थ्यरक्षणं आतुरस्य विकार प्रशमनं च ॥<sup>[11]</sup>

संक्षेपतः क्रियायोगो निदानं परिवर्जनं ॥<sup>[12]</sup>

**Following measures can be thought in case of *prameha*.**

**Sharir shudhi in reproductive period- (shodhan, rasayan)**

As mentioned in *Ayurveda*, *beejdosha* (*stree & purushbeej*-ovum & sperm respectively) is the primary cause of *sahaj prameha*, for formation & maintenance of healthy *beej*, *sharir shodhan* would be effective. There may be chances of late onset of disease, less severity of symptoms or complications due to *sharirshudhi*.

**Pre conception Sharir Shuddhi- (Shodhan, Rasayana, Vajikaran, Garbha Sanskara)**

*Acharya Kashyap*; father of *kaumarbhritya* said that life begins at conception & has 2 parts Intrauterine (from conception to birth) & Extra uterine (after birth). So for the vigorous progeny we have to think before and during conception period. For the formation of healthy *Garbha* 4 factors are mentioned in *Ayurveda* i.e. *Rutu* (proper period), *kshetra* (healthy uterus), *ambu* (hormonal balance), *beej* (normal gametes). For formation of all these factors properly, *sharir shodhan* would be helpful. *Panchakarma* plays an important role to balance the vitiated *doshas* in body. *Prameha* being *kapha pradhan vyadhi* role of *vaman* is absolutely important. Also, as *apan-vayu* controls the region of reproductive system and that role of *uttarbasti* is mentioned in the classics, it can also be very effective in *beej shudhi* in parents.

**Role of matu ahar-vihar during pregnancy:** During pregnancy *matru-ahar & vihar* play a key role in the sequel of *prameha vyadhi*. As during intrauterine life fetus is totally depend on mother for his development, nutrition; whatever she eats, think, do that all affect the fetus.

Hence if *hetusevan* is done by mother fetus would be affected with respective disease like *prameha*. So *matu ahar vihar* is very important during pregnancy.

### स्तन्यपान

मातुरेव पिबेत्स्तन्यं.... ।

(दूषयन्ति पयस्तेन शरीरा व्याधयः शिशोः।)

(Many researchers have shown that short breast feeding duration and early administration of cow's milk results in type 1 DM)

### DISCUSSION

*Prameha* being a major metabolic disorder has an impact on the nation's health. Growth and development of children, who are going to be the future of our country primarily rests on the shoulder of clinician. Due to the lack of curative treatment for type 1 DM, thought of preventive aspects will focus the disease. Proper preventive aspect can help to reduce the prevalence of T1DM. As explained above, by adapting principles of Ayurveda, view about preventive aspects of *sahaj prameha* would be beneficial.

### CONCLUSION

Maintaining *sharir dosh-dhatu-mala samyata* is the main theme of *nidan parivarjan* in any disease, so does it in *prameha*. By adapting above mentioned-*sharirshodhan* during reproductive period preconception, *rasayan-vajikaran prayog*, *matu ahar-vihar palam* (*garbhini & sutika paricharya palan*), *sahaj vyadhi* would be prevented including *prameha*. As *beejdosha* is the main cause for *sahaj prameha*, above mentioned preventive aspects would be beneficial for *sahaj prameha* and formation of healthy progeny.

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