



Evaluation of the Consumption of Multivitamines in Pediatrics Group in NGCSC in Riaydh – National Guard Health Affairs in the Period 2019-2020.

Dr. Ahmed Moosa Assery *

***Correspondence to:** Dr. Ahmed Moosa Assery, Ambulatory Care Pediatrics Consultant, King Abdulaziz Medical City, National Guard Health Affairs, Comprehensive specialized Clinics in Ummolhamaam.

Copyright© 2020: **Dr. Ahmed Moosa Assery**. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Received: 14 December 2020

Published: 28 December 2020

Abstract

Multivitamins are important element in the pediatrics development, simply they are organic nutrients that are required in small quantities for many different biochemical functions and generally (not entirely) cannot be synthesized by the body and must, therefore, be supplied by the diet. There are no clear and absolute international guidelines for the usage of multivitamins in pediatric patients, though According (AAP) recommendation that mentioned: children who have a healthy and balanced diet do not need a multi-vitamin unless their doctor recommends one. However, some international pediatrics medical institutions recommend MV usage in certain situations like:

- 1)_children with anorexia or in adequate appetite.*
- 2)_those with failure to thrive.*
- 3)_children with chronic diseases affecting their absorption and utilization of nutrients like chronic liver disease.*
- 4)_all newborn babies according to the AAP.*
- 5)-certain metabolic disorders that are mainly refiled by using MV as a cofactor.*
- 6)_ premature newborns who are still admitted in the intensive cares or nurseries.*

Here in this study, I will show to you what are the justifications behind describing such MV in a sample of 350 pediatrics patients who visited my clinic in the period between 2019 and 2020.

Such prescriptions ranged according to the presumed indications mentioned above without the request of the CSs and some given merely since of the CGs request. The ultimate goal is to judge are we prescribing such MV in a correct way or not?

Keywords:

MV: Multivitamins.

CG/s: Care giver/s.

AAP: American academy of pediatrics.

KAMC: King Abdulaziz Medical City.

NGCSC: National Guard Comprehensive Specialized Clinics.

Hx: History,

PE: Physical Examination.

KSA: Kingdom of Saudi Arabia.

Introduction

What are vitamins and how do they work? Vitamins are organic compounds that people need in small quantities. Each has a different role in maintaining health and bodily function. Each organism has different vitamin requirements. For example, humans need to get vitamin C from their diets — while dogs can produce all the vitamin C that they need. Most vitamins need to come from food because the body either does not produce them or produces very little. For humans, vitamin D is not available in large enough quantities in food. The human body synthesizes the vitamin when exposed to sunlight, and this is the best source of vitamin D. Different vitamins play different roles in the body, and a person requires a different amount of each vitamin to stay healthy (1).

Do Kids Need Vitamin Supplements? While vitamins are typically not harmful to children, ideally your child is getting enough nutrition from the food he or she eats.

“Even picky eaters get all of the nutrients they need from food, so typically, kids don’t need vitamins, but every kid is different and has different needs, so consult your paediatrician if you are worried.”

There are exceptions. “Infants, especially breastfed infants, need vitamin D supplementation and premature infants may be prescribed a multivitamin with iron before discharge from the neonatal intensive care unit.

Of course, you may decide to give your kids vitamins anyway as an insurance policy. That’s fine, especially

once your paediatrician has given the go-ahead. Just make sure to choose a vitamin that is formulated to your child's age group. Vitamins, taken properly, won't do any harm. Just don't let them take the place of a healthy diet, which children need for good growth.

Follow the "rainbow diet" and make sure your kids eat a colourful variety of fruits and vegetables to get the nutrients they need. In fact, children should get one to two cups of fruit and one to three cups of vegetables each day. Then, if you feel the need, give them a multivitamin as a bonus.

Most experts—including the AAP—don't offer an official position on vitamins, so if you're still on the fence, talk with your paediatrician to help make a final decision. (2).

Aim of the Study

_To know whether we are prescribing MV in the correct way according to the above considerations? Also, to seek standardized indications of MV in pediatrics.

THE DESIGN: Cross sectional.

Se Fngs: The study done on NGCSC in the period between 2019 and 2020.

TOOL: via the questioner designed for the CGs who requested the MV for their children to be answered on the same visit and collected from them before they leave while those deserved the MV (from our own opinion) I just registered them at the same time of the visit joined with indication of the prescription, all done in the NGCSC medical centre, Riyadh the capital of KSA.

Total Childrens was 350. and even the older children who are almost between 12 and 14 years old haven't been interviewed directly in contrast to that the information in the questioners taken from their CGs.

As well known in KSA the paediatrics categories are those from the birth till the age of 14 years old, and the pure vitamin D not included in this study since it is a part of our MV components.

Dose of the MV instructed according to what was recommended in the instruction papers inside the product box and all the children's CGs signed a consent to be involved in the study.

Method of the Study

The style of the study was achieved as cross-sectional one, the field of the study was in the NGCSC, every patient involved has been activated by the front reception of the clinic and the medical records patients information's have been confirmed then proceeded to the vital sign's records among which the nurses asked the CG about any significant previous medical history mainly presence of one of the following points:

- 1) Children with anorexia or in adequate appetite.
- 2) History of failure to thrive.
- 3) History of chronic diseases affecting their absorption and utilization of nutrients like chronic liver disease.
- 4) If newborn baby's age.
- 5) History of prematurity.
- 6) History of any inborn error disorders.

Those who have a metabolic disorder of course on a special mixture of vitamins have been excluded from the study for special considerations.

Then the Childrens transferred to the physicians who concerned During which a counselling with each CG again with detailed Hx and PE taken among which also we label the patients with each medical problem he/she was having, and after that we offer the MV according to what we see if indicated or according to the CGs request, we standardized one type of MV (**Figure 1**) called *SANOVIT* the drug our institution (KAMC) agreed with to be the exclusive MV prescribed for the children's.

After finishing from the visit, I distributed a questioner only to the CSs who subjunctively requested the MV for their children's asking them many questions in Arabic focussing mainly on the question, why you requested a MV for your child?

Those children's we prescribed the MV for them from our side have been only documented in a separate record each child name with indication (mentioned above) justified the MV prescription.

Then after we collected all the data, we summarized the net analysis of the study on the table which is coming in the next section of the result of the study.



Figure 1: The unified MV used in the study

The Result of the Study

From the whole 350 child's GCs we counselled we got 216 ones the MV prescribed according to the CGs request and when they asked why you need such MV for your child the answers were as follow:

_ 181 CGs mentioned the cause was due to poor body build (PBB).

_18 Due to poor appetite (PA).

_14 due to short stature of their children (SS).

_3 they don't know (?) (**Table 1**).

CGs causes of MV request:	Number of the children's
PA	181
SS	14
?	3

Table 1: Number of the Childrens given MV according to the CG request

While those have been given the MV from our side they represented 134 ones, and my justifications of the prescriptions were as follow:

_102 newborn child given MV according to the recommendation of the AAP.

_25 child given due to the anorexia they had.

_7 children due to the chronic disorders they are complaining from (**Table2**)

Our indication of MV prescription:	Number of the children's:
AAP Recommendations.	102
Anorexia.	25
Chronic disorders.	7

Table 2: Number of the Childrens given MV according to selected indications

Discussion

It looks from the results that total number of the children received the MV according to the desire of their CGs more than the one we prescribed for them the MN according to our simple (at least) logic indication mentioned , that is attracting us to a big debate about the issue of the MV consumption in the children, a debate that looks so chronic and so difficult to understand its aspects in the wise of the indications of the MV prescription, its real benefits, and its side effects and its cost affection.

Despite of the longtime faith and believe from the general population that the MV are a magic medicine that give them and their children the real health many scientific literatures denied that recently except little of them which still saying that that B-complex portion of the MV is the one triggers the appetite.

And one of the faiths also you may hear about is that the MV specially the vitamin C is an effective treatment for the flue and cold disorders that is also recently corrected to the fact that such vitamin is merely having a prophylactic effect against the cold and coryza not more and it can't relief the cold after its occurrence.

All of the above may be unimportant if we compare it to the importance of searching for real indications of

giving the MV for children, let her mention for you the best papers talked about this important point.

Under the title *Effect of, paediatric multivitamin syrups and effervescent tablets on the surface microhardness and roughness of restorative materials: An in vitro* a study done by *Elif Beril Gurdogan Guler a, Gokcen Deniz Bayrak b**, *Melis Unsal b, Senem Selvi Kuvvetli* published on *30 January 2020*; *Final revision received 11 March 2020*

On journal of dental sciences, they just mentioned that Children require the adequate number of vitamins and minerals to maintain healthy tissue and organ function as well as for growth and development (3).

Under the title of *Role of multivitamins and mineral supplements in preventing infections in elderly people: systematic review and meta-analysis of randomized controlled trials.*

A study done by *Alia El-Kadiki, Alexander J Sutton*, that study did not elaborate directly on the MV indication, instead it concluded that, the evidence for routine use of multivitamin and mineral supplements to reduce infections in elderly people is weak and conflicting. That was mentioned on *BMJ*, *doi:10.1136/bmj.38399.495648.8F* (published 31 March 2005) on BMJ journal (4).

Another paper *on Journal of Chromatography A* done by *Stojanka Vidovi'c a, *, Biljana Stojanovi'c a, Jelena Veljkovi'c a, Ljiljana Pra'zi'c-Arsi'c a, Goran Rogli'cb* under the title of *Simultaneous determination of some water-soluble vitamins and preservatives in multivitamin syrup by validated stability-indicating high-performance liquid chromatography method. (Journal of Chromatography A, 1202 (2008) 155–162).*

Mentioned that: Appropriate vitamin supplementation is necessary in case of active disease processes, stress, increased physical activity, low food quality, inadequate nutritional intake,

As you see from the previous and since long decades of years ago no clear absolute indications of using the MV which open the gate of the cost effectiveness on the medical institutions dealing with it and also making us in the risk of the morbidity that may occur behind the overdoses of them.

Conclusion

It seems that MV prescription for children by the pediatrician in all over the world relays on a subjective indication that still need more scientific modification to be clearer and stricter.

References

1. <https://www.medicalnewstoday.com/articles/195878>
2. <https://www.hopkinsmedicine.org/health/wellness-and-prevention/do-kids-need-vitamin-supplements3>
3. https://www.researchgate.net/publication/340813190_Effect_of_pediatric_multivitamin_syrups_and_effervescent_tablets_on_the_surface_microhardness_and_roughness_of_restorative_materials_An_in_vitro_study
4. <https://www.bmj.com/content/bmj/early/2004/12/31/bmj.38399.495648.8F.full.pdf>

